WEST

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Search Results -

Terms	Documents
l13 and l14	0

Database:
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Refine Search: l13 and l14 Clear

Search History

Today's Date: 5/3/2001

DB Name	Query	Hit Count	Set Name
TDBD	l13 and l14	0	L19
TDBD	l17 and l5 and l6	2	L18
TDBD	l3 and l4	4	L17
TDBD	l1 and l4 and (l5 or l6 or l7 or l8 or l9 or l10 or l11 or l12)	12	L16
TDBD	l1 and l3	0	L15
TDBD	(identif$ or recogni$ or distinguish$ or mak$ near2 out or inspect$ or verif$) near3 (person$ or someone or anyone or individual$ or people or human$ or personnel or identit$) or biometric$	322	L14
TDBD	(fingernail$ or toenail$) near3 bed$ or nailbed$ or nail$ near3 bed$	23	L13
TDBD	optic$ near3 process$ near3 (energ$ or light$ or beam$ or ray$)	7	L12
TDBD	scan$ near3 (light$ or beam$ or ray$)	683	L11
TDBD	(reflect$ or reflecting or redirect$ or redirecting or re adj (direct$ or directing)) near3 (light$ or beam$ or ray$) or direct$ near3 coupl$	1569	L10
TDBD	(polariz$ or polaris$) near3 (light$ or beam$ or ray$)	411	L9
TDBD	(acousto adj optic$ or acoustooptic$) near2 modulat$	26	L8
TDBD	shift$ near3 frequenc$	168	L7
TDBD	modulat$(5n)(light$ or beam$ or ray$)	12248	L6
TDBD	(split$ or divid$) near3 (light$ or beam$)	449	L5
TDBD	collimat$ near3 (light$ or beam$)	277	L4
TDBD	optic$ near3 interferomet$	34	L3
TDBD	(broadband or broad adj band) near2 optic$ near2 interferomet$	0	L2
TDBD	((identif$ or recogni$ or distinguish$ or mak$ near2 out or scan$ or inspect$ or verif$) near3 (pattern$ or arrangement$ or outline$ or composition$ or compose$ or form$))	1023	L1

May 3, 2001

Dear Mr. Bali,

Attached please find the results of the prior art search you requested for application #09/207,339. For claim 1, I found several references to pattern recognition systems featuring collimated beams of light and one or more of the light manipulating steps indicated in the first 10 parts of that claim. I also found a reference or two mentioning broadband optical interferometry and one or more of the first three steps. There were several more references when I used just the term optical interferometry. With respect to identification of persons using fingernail beds, I found one article about a company that does this, probably the assignee, as well as a few mentions that this process exists (past the filing date).

Please let me know if you have any questions.

Regards,

Geoffrey St. Leger
3T05/306-0254

```
File  15:ABI/Inform(R) 1971-2001/May 03
         (c) 2001 Bell & Howell
File 635:Business Dateline(R) 1985-2001/May 03
         (c) 2001 Bell & Howell
File   9:Business & Industry(R) Jul/1994-2001/May 02
         (c) 2001 Resp. DB Svcs.
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 647:CMP  Computer Fulltext 1988-2001/Apr W5
         (c) 2001 CMP
File 275:Gale Group Computer DB(TM) 1983-2001/May 01
         (c) 2001 The Gale Group
File 674:Computer News Fulltext 1989-2001/Apr W3
         (c) 2001 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2001/May 02
         (c) 2001 The Dialog Corp.
File  98:General Sci Abs/Full-Text 1984-2001/Mar
         (c) 2001 The HW Wilson Co.
File 624:McGraw-Hill Publications 1985-2001/May 01
         (c) 2001 McGraw-Hill Co. Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2001/May 02
         (c) 2001 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2001/May 02
         (c) 2001 The Gale Group
File 369:New Scientist 1994-2001/Apr W3
         (c) 2001 Reed Business Information Ltd.
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 613:PR Newswire 1999-2001/May 03
         (c) 2001 PR Newswire Association Inc
File  16:Gale Group PROMT(R) 1990-2001/May 02
         (c) 2001 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 148:Gale Group Trade & Industry DB 1976-2001/May 02
         (c)2001 The Gale Group
File 553:Wilson Bus. Abs. FullText 1982-2001/Mar
         (c) 2001 The HW Wilson Co
File 634:San Jose Mercury  Jun 1985-2001/Mar 31
         (c) 2001 San Jose Mercury News
File  88:Gale Group Business A.R.T.S. 1976-2001/May 03
         (c) 2001 The Gale Group

Set     Items   Description
S1      47461   (IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR -
             SCAN? OR INSPECT? OR VERIF?)(3N)(PATTERN? ? OR ARRANGEMENT? ?
             OR OUTLINE? ? OR COMPOSITION? ? OR COMPOSE? ?)
S2          4   (BROADBAND OR BROAD()BAND)(2N)OPTIC?(2N)INTERFEROMET?
S3       1419   OPTIC?(3N)INTERFEROMET?
S4       1317   COLLIMAT?(3N)(LIGHT? OR BEAM?)
S5       6107   (SPLIT? OR DIVID?)(3N)(LIGHT? ? OR BEAM? ?)
S6       4644   MODULAT?(5N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S7       4648   SHIFT?(3N)FREQUENC???
S8        232   (ACOUSTO()OPTIC? OR ACOUSTOOPTIC?)(2N)MODULAT?
S9       5005   (POLARIZ? OR POLARIS?)(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S10     19050   (REFLECT? ? OR REFLECTING OR REDIRECT? ? OR REDIRECTING OR
             RE()(DIRECT? ? OR DIRECTING))(3N)(LIGHT? ? OR BEAM? ? OR RAY?
             ?) OR DIRECT?(3N)COUPL???
S11     14604   SCAN?(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S12       927   OPTIC?(3N)PROCESS?(3N)(ENERG??? OR LIGHT? ? OR BEAM? ? OR -
             RAY? ?)
S13      1496   (FINGERNAIL? ? OR TOENAIL? ?)(3N)BED? ? OR NAILBED? ? OR N-
             AIL? ?(3N)BED? ?
S14    240610   (IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR -
             INSPECT? OR VERIF?)(3N)(PERSON?? OR SOMEONE OR ANYONE OR INDI-
```

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                VIDUAL? ? OR PEOPLE OR HUMAN? OR PERSONNEL OR IDENTIT???) OR -
                BIOMETRIC?
S15           0   S1(3N)S3
S16           0   S3(S)S4(S)S5(S)S6
S17           3   S3 AND S4 AND S5 AND S6
S18           6   S1 AND S4(S)S5:S12
S19          10   S14(S)S13
S20           7   RD (unique items)
S21          30   S14 AND S13
S22          20   S21 NOT S19
S23          18   RD (unique items)
```

2/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01753100 SUPPLIER NUMBER: 16645509 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Precision reflectometer with spurious-free enhanced sensitivity. (HP 8504B precision reflectometer) (Technical)
Braun, David M.; Derickson, Dennis J.; Fernandez, Luis M.; LeCheminant, Greg D.
Hewlett-Packard Journal, v46, n1, p39(4)
Feb, 1995
DOCUMENT TYPE: Technical ISSN: 0018-1153 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2337 LINE COUNT: 00190

...ABSTRACT: optical fiber systems. HP has developed a precision reflectometer, the HP 8504B, which employs an optical low-coherence reflectometry technique. The technique uses a Michelson **interferometer** with a low-coherence, **broadband optical** source for the measurement of optical reflections. A translating mirror is contained in one arm of the device, the device under test (DUT) is placed...
... optical reflections in optical fiber systems.[1,2] The HP 8504B precision reflectometer (Fig. 1) uses an optical low-coherence reflectometry technique employing a Michelson **interferometer** with a low-coherence, **broadband optical** source to make spatially resolved measurements of optical reflections. One arm of the Michelson interferometer contains a translating mirror and in the other interferometer arm...

2/3,K/2 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

04322152 SUPPLIER NUMBER: 19587742
Noise and information in interferometric cross correlators.
Hill, Kent B.; Basinger, Scott A.; Stack, Ronald A.; Brady, David J.
Applied Optics, v36, n17, p3948(11)
June 10, 1997
ISSN: 0003-6935 LANGUAGE: English RECORD TYPE: Abstract

AUTHOR ABSTRACT: We consider **optical interferometric** cross correlators based on **broadband** light sources. We derive the signal-to-noise ratio from basic principles and supply experimental evidence that corroborates the theoretical analysis. Noise sources are discussed...

2/3,K/3 (Item 2 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

03568684 SUPPLIER NUMBER: 16959415
Balancing optical **path lengths in** broadband **fiber** interferometers.
Burnett, J.G.; Greenaway, A.H.; McBride, R.; Jones, J.D.C.
Applied Optics, v34, n13, p2194(8)
May 1, 1995
ISSN: 0003-6935 LANGUAGE: English RECORD TYPE: Citation

Balancing optical **path lengths in** broadband **fiber** interferometers.

2/3,K/4 (Item 3 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

02846886 SUPPLIER NUMBER: 12983103
Cutting optical **fibers to equal lengths for** broadband **stellar**

interferometry. (Optical **Technology)**
Burnett, J.G.; Jones, J.D.C.
Applied Optics, v31, n16, p2977(2)
June 1, 1992
ISSN: 0003-6935 LANGUAGE: English RECORD TYPE: Citation

Cutting optical **fibers to equal lengths for** broadband **stellar** interferometry. (Optical **Technology)**
?

17/TI/1 (Item 1 from file: 16)
DIALOG(R)File 16:(c) 2001 The Gale Group. All rts. reserv.

Manufacturers and Suppliers.(Alphabetical list of companies)

17/TI/2 (Item 1 from file: 148)
DIALOG(R)File 148:(c)2001 The Gale Group. All rts. reserv.

Manufacturers. (laser industry) (The 1992 Buyers Guide) (Directory)

17/TI/3 (Item 1 from file: 88)
DIALOG(R)File 88:(c) 2001 The Gale Group. All rts. reserv.

Fourier transform infrared spectrometry.
?

18/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00914083 95-63475
How flat is that?
Stout, Gail
Quality v33n9 PP: 18-22 Sep 1994
ISSN: 0360-9936 JRNL CODE: QUA
WORD COUNT: 2568

...TEXT: reading gage. An inspector places the gage in the surface plate's center on the longest center line and zeros the indicator. Under 18", the **scanning pattern** is random. Larger plates use the eight-line Union Jack **pattern** . When this gage **identifies** heightened areas, they are meticulously hand flattened with an abrasive.

Though Europeans prefer a grid pattern as a method for dividing a plate surface for...true of any metrology equipment."

HOW AUTOCOLLIMATORS WORK

Light from an object point (O) is collimated or made parallel by an objective lens. If the **collimated beam** falls perpendicular to a plane **reflecting** surface, the **light reflects** back along its original path and focuses at a point coincident with the objective points. If the reflector is tilted through an angle 0, then...

...known constant for the autocollimator, measurement of the displacement d enables ascertaining the tilt 0.

Each measurement results in a datapoint along a Union Jack **pattern** . An **inspector** measures each straight line of the Union Jack independently (AB, BC, CD, DA, etc). In data reduction, diagonals are joined at their midpoint (called closure...

18/3,K/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01318214 SUPPLIER NUMBER: 07921912 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Inspection and quality control using laser profile analysis.
Laskowski, Edward L.
I&CS (Instrumentation & Control Systems), v62, n9, p31(4)
Sept, 1989
ISSN: 0746-2395 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2612 LINE COUNT: 00201

... rate be appropriate to detect significant features.

Another way to go

Namco Controls has developed a line scanner one-dimensional sensor for silhouette profiling. A **scanning** laser **beam** is swept down across the part as it passes. Behind the part lies a retroreflective strip of tape that returns light immediately back to the scanning sensor. Since the **collimated beam** of **light** does not expand significantly, even at relatively large distances, it acts as a focused spot for detecting part edges--no lenses are needed.

Because the...are not.

The system can easily inspect and sort one container from another as long as they have some shape difference. Fig. 4 shows an **arrangement** for **scanning** bottles.

There are roughly 30 to 40 common container designs for beverages. Accounting for forward or reverse entry, there are about 80 discrete pattern designs...

18/3,K/3 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

04538001 Supplier Number: 46667475 (USE FORMAT 7 FOR FULLTEXT)
Laser Microscope Could Make Diagnosing Melanoma Easier
Dermatology Times, p1
Sept, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 659

... melanoma clinical research fellow working under the direction of Arthur Sober, MD, associate professor, department of dermatology, Harvard Medical School, Boston.

In this instrument, a **collimated** 1064-nm **beam** of the Nd:YAG laser passes into the CSLM with video rate scanning using a galvanometric and polygon mirrors, which **scan** the **light** in 'X' and 'Y' directions, respectively. After passing through the 100X microscope lens to the skin, the light is reflected back, separated from incoming **light** by a **beam splitter** , and is eventually recorded on both a video monitor and videotape recorder. The imaging is based on the detection of singly backscattered photons. Melanin strongly...

...by the fact that the confocal scanning laser microscope produces horizontal images whereas the pathology sections are vertical.

In these preliminary trials, the researchers have **identified** several **patterns** which they believe characterize different skin layers and benign and malignant pigmented lesions. For example, the stratum corneum appears to be distinguished by its backscatter...

18/3,K/4 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

08578856 SUPPLIER NUMBER: 18122708 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Face recognition: the oldest way to verify ID is now the newest.(Imaging Technology)
Kuperstein, Michael
Defense & Security Electronics, v28, n3, p28(2)
March, 1996
ISSN: 1084-2829 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2261 LINE COUNT: 00175

... Neural nets are a class of mathematical models that roughly mimic brainlike computing and do two things well -- learn from their own previous experience and **recognize** **patterns** in a context. Where most software employ hard rules -- i.e., something is either true or not true -- neural nets are fuzzy. They say that...ray source on one side and 48 three-inch detectors on the other. "The technology is quit simple," said Orphan. "The gamma-ray source is **collimated** into a fan **beam** that passes through the vehicle being inspected and detectors on the other side measure the attenuation of the gamma **rays** ." The **scanning** speed of the VACIS is about one foot per second. Once scanned the image is passed to a computer and presented to the operator in...

18/3,K/5 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

05592946 SUPPLIER NUMBER: 12399671 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Manufacturers. (laser industry) (The 1992 Buyers Guide) (Directory)
Laser Focus World, v27, nSPEISS, p746(155)
Dec 15, 1991
DOCUMENT TYPE: Directory ISSN: 0740-2511 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT
WORD COUNT: 139277 LINE COUNT: 11434

... George; ch sci, Nicholas George; 1982 Manufacturers ring-wedge-photodetector & complete optical-recognition systems incorporating ring-wedge detectors, 64-channel interfaces, and software. Applications include **pattern recognition** , defect detection, surface finish, participate analysis, and medical instrumentation. Offers consulting services in all phases of optical **pattern recognition** with emphasis on high-speed, real time systems. (see ad p 180)
Automatic Switch Co, Angar Scientific Co Inc, PO Box 538, Florham Park, NJ...

...vision systems for applications including on-line sensing and control; display; analog, digital, and microprocessor information processing; materials characterization and processing; computer control; and measurement, **inspection** , and optical **pattern recognition** . Evaluates technical & commercial feasibility of new systems. Provides contract R & D and prototypes.
Axiom Analytical Inc. 1278 Glenneyre, Laguna Beach, CA. 92651; 714-497-1407...William Adaway; gen mgr, Sal D'Agostino; 1981 Manufactures of machine vision systems for the electronics, food, pharmaceutical, printing, traffic, and other industries. Products include **pattern recognition** (TRACKER), OCR (READER), print quality inspection, traffic analysis system (TAS), 3D inspection, and general 2D gaging and inspection. systems.
Comstock Inc, 1005 Alvin Weinberg Dr...s&e 15, 1981 Manufactures industrial machine vision systems for the electronics, food, pharmaceutical, printing, and traffic industries. Products include; optical character readers (OCR) and **verifiers** , **pattern recognition** , web **inspection** , traffic analysis system (TAS), and target vision ongines (TPRIP). CRS 1 000 systems make extensive use of high speed hardware based algorithms. More than 500...s&e 30,1982 Manufactures image processing boards, modular subsystems, and software development tools for machine vision and image analysis. Specific applications include automated IC **inspection** and assembly; **pattern recognition** ; measurement; robot guidance; biomedical image analysis; medical image enchancement; and particle sizing.
Imatronic Inc, 1275 Paramount Pkwy, Batavia, IL 60510; 708-406-1920, FAX 708...vp mfg, Michael Gillespie; acct mgr, Deborah Harris; emp 20, 1963 Manufactures He-Ne lasers, custom laser tubes, and industrial laser systems; holographic instruments including **beam** expanders, **collimators** , **splitters** , spatial filters, electronic shutter systems, and power meters. Distributor of Kodak, Agfa-Gevaeft, and Ilford holographic plates and film, Designs custom HeNe line generators, vision...Lambrecht Sr; vp, Alvin Lambrecht;.mktg mgr, Hank Banas; ch sci, Vinod K. Vats; r&d, Raymond Lambrecht; emp 29, s&e 4, 1933 Manufactures **beam splitters** , coatings, **collimators** , optical filters, lenses, mirrors, polarizers, waveplates, Babinet-Soliel compensators, optical attenuators, and radiometers/ photometers. Provides optical-coating, lens-design services, prototype and small run manufacturing...

18/3,K/6 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

04872116 SUPPLIER NUMBER: 09125318 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Biometric systems open the door. (fraud prevention and security-control devices)
Rosen, Jerome
Mechanical Engineering-CIME, v112, n11, p58(4)
Nov, 1990
ISSN: 0025-6501 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 2732 LINE COUNT: 00218

... when he was helping his father, who is an opthamologist, take

photos to detect eye disease. Hill researched the medical literature and learned that retinal **patterns** are unique.

Retinal **scanners** have found a variety of uses in security access control at the Pentagon and various intelligence agencies. The Arkansas Democrat newspaper in Little Rock, uses...

...in other states, the Federal Highway Administration commissioned a study of the use of retinal scans as a solution of the problem.

Eyedentify's retinal **pattern verifier** is equipped with a lighted concentric circle eye target and a headrest. According to a company spokesman, "The back of the eye is like a...
...by pressing a button. (A hands-free mode automatically senses the user's presence and begins the scan.)

During the scan, a very low-intensity **collimated** infrared **light beam** from an LED shines through the lens of the eye onto the retina and follows a circular path about the center of vision. The amount...

...light reflected back from the eye is sensed by the verifier and recorded as the beam progresses around the circular path. The intensity of reflected **light** is thus **modulated** by the difference in the reflectivity between the retinal blood vessels and the adjacent tissue.

This information is compared against retina blood vessel pattern information...
?

20/TI/1 (Item 1 from file: 9)
DIALOG(R)File 9:(c) 2001 Resp. DB Svcs. All rts. reserv.

Going Beyond The Fingernail

20/TI/2 (Item 1 from file: 275)
DIALOG(R)File 275:(c) 2001 The Gale Group. All rts. reserv.

Identifying risks in biometrics use.(Technology Information)

20/TI/3 (Item 1 from file: 621)
DIALOG(R)File 621:(c) 2001 The Gale Group. All rts. reserv.

Teradyne Acquires Control Automation, Manufacturer of Automated Optical Inspection Systems

20/TI/4 (Item 1 from file: 636)
DIALOG(R)File 636:(c) 2001 The Gale Group. All rts. reserv.

-SJB SERVICES: Facing up to biometrics

20/TI/5 (Item 1 from file: 813)
DIALOG(R)File 813:(c) 1999 PR Newswire Association Inc. All rts. reserv.

Facing Up to Biometrics: New Report Shows How Biometric Technologies Will Change People's Lives

20/TI/6 (Item 1 from file: 16)
DIALOG(R)File 16:(c) 2001 The Gale Group. All rts. reserv.

Teradyne Acquires Control Automation

20/TI/7 (Item 1 from file: 148)
DIALOG(R)File 148:(c)2001 The Gale Group. All rts. reserv.

Integration yields assembly benefits.
?

20/9/1 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)

02650563 (THIS IS THE FULLTEXT)

Going Beyond The Fingernail
(Automated Individual Monitoring System Technology (Little River, SC) develops biometric system that identifies people via epidermal patterns underneath fingernails)

ID ~~World, v 1,~~ n 5, p 41+
November 1999
DOCUMENT TYPE: Journal (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1121

ABSTRACT:
Automated Individual Monitoring System Technology Inc (AIMS) (Little River, SC) is working on a **biometric** system that **identifies people** by their **nailbeds** - the epidermal patterns underneath fingernails. The company is focusing on the technology because it is non-invasive, citing concerns that some consumers would object to other **biometric** methods. The system can take readings through nail polish or gloves, and acts like a bar code reader that takes less than one second. The information is expected to consume between 8-256 bytes of memory, depending on resolution. The length of scanning can be adjusted for different levels of security. AIMS wants to lend its technology to an established company, and is also seeking partners to obtain the $1.2 mil needed to develop the system. Some analysts hold the company faces challenges in getting the technology to market, due to infrastructure and other concerns. The full text discusses additional advantages of the system.

TEXT:
Searching for an unobtrusive and efficient method for **identifying individuals** , five entrepreneurs have developed a **biometric** technology that reads patterns on the hand's **nailbed** .

By Richard Mitchell

While an expanding number of corporations and government entities are positioning biometrics as a more efficient method for identifying customers, workers and benefits recipients, getting persons comfortable with the technologies remains a challenge. The fingerprint, for instance, one of the most popular biometric applications, often carries a criminal stigma. Fingerprinting also is viewed by some as an invasion of privacy, causing potential users to resist such systems.

The development of unobtrusive **biometrics** , thus, is a strategy of some vendors trying to stand out in an increasingly competitive market. One such vendor is Little River, S.C.-based Automated Individual Monitoring System Technology Inc. (AIMS), which developed a procedure to ID persons by the patterns on their **nailbeds** , the epidermal structure located directly beneath the fingernail.

The system uses a scanner that can read nailbed patterns through fingernail polish or latex gloves. Under the system, an individual's "bar code" is taken by shining a light into the fingertip. By tracking the frequency, duration, signal strength, and reflected rays from the outgoing light, the hidden nailbed structure is analyzed. The pattern can be stored in a central computer database or on a microprocessor chip. During a transaction, users will wave their fingers in front of a scanner and the patterns are compared to the stored data.

The nailbed identifier concept was developed after Allen Topping, a San Francisco-based AIMS partner and retired video engineer, read a newspaper story about newborns being mistakenly swapped at a hospital. He began considering new methods of identification, particularly those that would not alienate the public.

photo omitted
"This is a process of non-evasive biometric matching," Topping says. "My mother is 84 and there is no way she will let someone take a fingerprint of her. That is for criminals. There is no way she will allow anyone to put a laser light into her eyeball. But she will go with the fingernail because it is a disposable part of a person's anatomy. People won't think that it is invasive."

The technology, he believes, is superior to such other biometric identifiers as fingerprints, hand geometry, or voice recognition because it is less intrusive. "The public will be repulsed at both the handling and the close proximity to objects that have been used by people unknown," the company's literature states. "In locations of high ambient noise...voice scanning will be extremely difficult without the use of sophisticated filtering equipment. AIMS operation is not affected by noise pollution."

Because the nailbed is read in a similar manner as the bar codes on consumer products, Topping says transactions will take less than a second. The bar code is expected to take up between 8 and 256 bytes of memory, depending on the resolution.

But the nailbed system differs from that of a traditional bar code because an exact match is not required to **identify individuals** . For instance, while the digitized **nailbed** may create an identity pattern represented by the numbers 12345678987654321, a "low resolution quick scan" may only search for 1-3-56798---43--. While that is an incomplete read, it may be more than satisfactory considering the millions of possible combinations of spaces between the **nailbed** ridges and the thickness and height of each **nailbed** ridge, Topping says.

"Given the enormous number of possible combinations and the end user's options to increase or decrease the scanned resolution, the practical applications are immense," Topping notes. "Because each nailbed is unique, a series of very low-resolution scans using one or more different fingernails may be judged sufficient and equal to a very high-resolution scan of a single finger."

Security levels could be adjusted for different situations, he says. For instance, a bank identifying a customer who wants to withdraw $20 from an ATM may just require a 1/8th-second scan of a single finger. For larger withdrawals, when more security is deemed necessary, the bank might require a 1-second scan of the same finger.

"At the opposite extreme, unlocking a nuclear warhead might require several minutes of scanning for all 10 fingers, inserted in a specific sequence, and from one or more people," Topping notes. "The possible combinations of data words are beyond computation." The same scanner could be used for each circumstance, with adjustments made to the device for the resolution and time function, he adds.

Challenges Await

But for all their enthusiasm and confidence in the system, AIMS still faces the challenge of getting a product to market. The nailbed is still just a theoretical process, and the partners still are seeking investors that can contribute up to $1.2 million to develop a system. "We want to turn it over to someone already in the business," says Austin Gormley, a Little River-based partner. "We just want to give it away and get royalties out of it."

The partners are discussing their technology with potential users, including representatives from the U.S. Federal Aviation Administration and NASA. The Department of Energy is conducting laboratory tests on the concept, Gormley says. While he cannot yet state what the costs will be to implement a system, Gormley expects the scanners to sell for about $40.

The partners are hesitant to release specific details about their system before it is implemented. But admit they have filed for a second patent that will make the nailbed ID procedure more efficient.

"The mind-set of the endpoint users ultimately will be far more decisive to the evolution of biometrics than the nature of any technology," Topping says. "There are a whole bunch of very good biometric recipes, but the developers have been so obsessed with the technical problems that they forgot about people like my mom (and their attitudes)."

Despite the partners' optimism that **nailbed** identification may eventually displace other **biometrics** , industry analysts and vendors believe AIMS has a difficult task in making its mark in the market. "It is not whether the technology is viable, but whether there is a niche where it has an advantage over systems operating in an existing infrastructure," says Joseph Atick, chief executive officer of Visionics Corp., a Jersey City, N.J.-based developer of face recognition technology.

Other Choices

Though AIMS executives say an advantage of the nailbed system is that it can take up minimal memory in a database, Atick says the nailbed technology is not alone in that regard. "Facial recognition takes 84 bytes, and you can't get down to much beyond that," he says. "It doesn't surprise me that new technologies are being developed because there are a lot of unique characteristics of the human body. But the question is whether the technology is viable, unique and easy to implement."

20/9/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02269230 SUPPLIER NUMBER: 53880053 (THIS IS THE FULL TEXT)
Identifying risks in biometrics use.(Technology Information)
McMurchie, Laura Lyne
Computing Canada, 25, 6, 11(1)
Feb 12, 1999
ISSN: 0319-0161 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 781 LINE COUNT: 00066

TEXT:

Experts say technology could contribute to decline in employee morale and 'citizenship behaviours'

Manufacturers are rushing to develop a variety of new biometrics technologies that can identify people by everything from body scent to the shape of their ear. But a U.K.-based research group says businesses should understand that biometric solutions aren't one-size-fits-all.

Cleanliness of the user, their age, any diseases they may suffer from, their profession and gender can all affect the performance of biometrics, according to the 1999 Biometrics Report conducted by the research division of SJB Services.

Biometrics - technologies that can **verify** a **person** 's **identity** by the unique physical characteristics found in their fingerprints, retinas, iris, palms or even **fingernail beds** - has been lauded for reducing fraud and increasing security.

According to market forecasters Frost & Sullivan, the worldwide market for biometric systems was worth US$102.8 million in 1996, an increase of almost seven per cent from the previous year. Originally popular only in law enforcement situations, today's biometrics technologies have been incorporated into computer security and physical access control systems, as well as in the banking and healthcare industries.

But what companies stand to gain from the efficiency and effectiveness of biometrics, they risk losing in employee morale, according to some industry observers.

Research has shown that employees don't respond well to the "Big Brother" approach and productivity may be reduced, according to Dr. Lorne Sulsky, chair of the Canadian Society for Industrial and Organizational Psychology and a professor of psychology at the University of Calgary. "It causes stress, there is no question about it," he says, adding that stress has been shown to increase absenteeism in the workplace.

The encroaching use of technology to control physical access can backfire if employees perceive its implementation to be a top-down edict, Sulsky warns. "Perceptions of organizational injustice predict decreases in citizenship behaviours, like going beyond the call of duty."

It may also prompt what Sulsky calls organizational retaliatory behaviour. "Of course, the ultimate in organizational retaliatory behaviour is someone going into the office and shooting someone - those are the cases that make the press," he says. But the other, more likely, outcomes are the small gestures employees do or don't do to make their point known, like stealing supplies or refusing to help colleagues.

Despite these concerns, manufacturers of biometric products continue to march towards developing creative, and perhaps odd, ways of identifying people by their physical characteristics or behaviours.

ART Techniques, a French company, is working on the Octophone, a telephone-like biometric device which captures images of the ear.

And Mastiff Electronic Systems has been exploring the viability of the Scentinel, an odour verifier.

"The idea of a smell verifier is usually received with laughter and comments about arm pits," write the authors of the Biometrics Report. "Although it may seem like an idea cooked up in a school classroom - which is not that far from the truth - on closer inspection, Scentinel is a system which appears to work using technology which is proving itself in other industries."

There is no way of predicting how invasive biometric technologies will become in the constant quest to secure corporate data, says Rob

Enderle, a senior analyst with Santa Clara, Calif.-based Giga Information Group.

And no one can rule out the possibility that employees might one day be asked to sport embedded chips for ultimate access control and security, he says. "It's going to take a while before culture allows that kind of thing but the technology will be here pretty quickly."

The technology isn't as far away as some might like to believe.

Doctors at Emory University in Atlanta recently implanted a tiny chip into the brain of a mute and paralyzed 53-year-old man who can now communicate simple messages by moving a cursor on a laptop computer with mere brain power.

"As we look at wearable computers, it's not a big jump to say, 'OK, you have a wearable, why not just embed the device?'" Enderle adds.

While industry continues to explore new ways of incorporating the convenience and security of biometric technologies, the jury is still out on some of their long-term health and privacy implications, he says.

Meanwhile, Enderle predicts a few select people will benefit even if the implementation of invasive biometrics eventually backfires. "Biometrics is the kind of technology that makes a certain class of attorneys very rich."

20/9/4 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

03937046 Supplier Number: 50221322 (THIS IS THE FULLTEXT)
-SJB SERVICES: Facing up to biometrics
M2 Presswire, pN/A
August 5, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 303
TEXT:
M2 PRESSWIRE-5 August 1998-SJB SERVICES: Facing up to biometrics (C)1994-98 M2 COMMUNICATIONS LTD

RDATE:050898

-- New report shows how biometric technologies will change people's lives

Facial recognition is now a viable technology claims a new edition of the most comprehensive industry research report, The Biometrics Report, published today by SJB Services. Advances in face recognition technology have seen installations within the banking sector alone rise from zero to 11.8% since the end of 1996.

Although many people are already using biometric technologies in one form or another -- connecting baggage and boarding cards to airline passengers in Malaysia, cashless transactions in Eastern Europe and combating mobile telephone subscription fraud and hardware theft in the US -- most have no idea what biometrics are and how these identification systems measuring human characteristics such as face, fingerprints, hand geometry, iris pattern, signature dynamics and even smell, will change their lives. According to The Biometrics Report, these verification systems are changing the way in which people live and work and even greater changes can be expected in the years to come.

The status of the **biometrics** industry: Technologies (Fingerprint, Hand, Eye, Face, Voice, Signature, Ear, Smell, Keystroke Dynamics, **Nail Bed**); Suppliers; Standards; Applications (Banking, Immigration, Welfare, Healthcare, Physical Access Control, Computer Security, Telecommunications, Law and Order) and Future Trends, are all covered in The **Biometrics** Report. Over 300 pages long, it includes details of over 100 suppliers and 400 installations around the world. The **Biometrics** Report is available in printed format (GBP 497/US$849) and on CD-ROM (GBP 994/US$1,698).

CONTACT: Emma Newham, SJB Services Tel: +44 (0)1458 253344 Fax: +44 (0)1458 253366 e-mail: enewham@sjb.co.uk WWW: http://www.sjb.co.uk

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File 238:Abs. in New Tech & Eng. 1981-2001/Apr
         (c) 2001 Reed-Elsevier (UK) Ltd.
File 108:AEROSPACE DATABASE 1962-2001/APR
         (c) 2001 AIAA
File   8:Ei Compendex(R) 1970-2001/Apr W1
         (c) 2001 Engineering Info. Inc.
File  77:Conference Papers Index 1973-2001/May
         (c) 2001 Cambridge Sci Abs
File  35:Dissertation Abstracts Online 1861-2001/May
         (c) 2001 UMI
File 202:INFORMATION SCIENCE ABS. 1966-2001/ISSUE 02
         (c) INFORMATION TODAY, INC
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         (c) 2001 BLDSC all rts. reserv.
File   2:INSPEC 1969-2001/Apr W5
         (c) 2001 Institution of Electrical Engineers
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         (c) 2001 Cambridge Sci Abs
File 233:Internet & Personal Comp. Abs. 1981-2001/May
         (c) 2001 Info. Today Inc.
File  94:JICST-EPlus 1985-2001/Apr W2
         (c)2001 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2001/Apr 27
         (c) 2001 The Gale Group
File 603:Newspaper Abstracts 1984-1988
         (c) 1999 Bell & Howell
File 483:Newspaper Abstracts Daily 1986-2001/May 01
         (c) 2001 Bell & Howell
File   6:NTIS 1964-2001/May W2
         Comp&distr  2000 NTIS, Intl Cpyrght All Right
File 144:Pascal 1973-2001/Apr W5
         (c) 2001 INIST/CNRS
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  34:SciSearch(R) Cited Ref Sci 1990-2001/Apr W5
         (c) 2001 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2001/Mar
         (c) 2001 The HW Wilson Co.
File 583:Gale Group Globalbase(TM) 1986-2001/Apr 27
         (c) 2001 The Gale Group
File 266:FEDRIP 2001/Apr
         Comp & dist by NTIS, Intl Copyright All Rights Res
File  62:SPIN(R) 1975-2001/Feb W3
         (c) 2001 American Institute of Physics
File 239:Mathsci 1940-2001/Jun
         (c) 2001 American Mathematical Society

Set     Items   Description
S1     230321   (IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR -
             SCAN? OR INSPECT? OR VERIF?)(3N)(PATTERN? ? OR ARRANGEMENT? ?
             OR OUTLINE? ? OR COMPOSITION? ? OR COMPOSE? ?)
S2         78   (BROADBAND OR BROAD()BAND)(2N)OPTIC?(2N)INTERFEROMET?
S3      38077   OPTIC?(3N)INTERFEROMET?
S4      12899   COLLIMAT?(3N)(LIGHT? OR BEAM?)
S5      18108   (SPLIT? OR DIVID?)(3N)(LIGHT? ? OR BEAM? ?)
S6      76142   MODULAT?(5N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S7      64636   SHIFT?(3N)FREQUENC???
S8       5005   (ACOUSTO()OPTIC? OR ACOUSTOOPTIC?)(2N)MODULAT?
S9     113933   (POLARIZ? OR POLARIS?)(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S10     40492   (REFLECT? ? OR REFLECTING OR REDIRECT? ? OR REDIRECTING OR
             RE()(DIRECT? ? OR DIRECTING))(3N)(LIGHT? ? OR BEAM? ? OR RAY?
             ?) OR DIRECT?(3N)COUPL???
S11     76219   SCAN?(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S12      9686   OPTIC?(3N)PROCESS?(3N)(ENERG??? OR LIGHT? ? OR BEAM? ? OR -
             RAY? ?)
S13      1058   (FINGERNAIL? ? OR TOENAIL? ?)(3N)BED? ? OR NAILBED? ? OR N-
             AIL? ?(3N)BED? ?
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S14	103291	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR - INSPECT? OR VERIF?)(3N)(PERSON?? OR SOMEONE OR ANYONE OR INDI- VIDUAL? ? OR PEOPLE OR HUMAN? OR PERSONNEL OR IDENTIT???) OR - BIOMETRIC?
S15	0	S1 AND S2
S16	233	S1 AND S3
S17	0	S16 AND S4 AND S5:S12
S18	0	S16 AND S4
S19	2	S3 AND S4 AND S5 AND S6
S20	27	S1 AND S4 AND S5:S12
S21	20	RD (unique items)
S22	0	S2 AND S4
S23	3	S13 AND S14

19/5/1 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

1334243 NTIS Accession Number: AD-D013 176/3
Phase-Modulated Polarizing Interferometer
(Paten)
Bareket, N. ; Metheny, W. W.
Department of the Navy, Washington, DC.
Corp. Source Codes: 001840000; 110050
Report No.: PAT-APPL-6-395 769; PATENT-4 480 916
Filed 6 Jul 82 patented 6 Nov 84 7p
Languages: English Document Type: Patent
Journal Announcement: GRAI8802
Supersedes PAT-APPL-6-395 769, AD-D010 745.
This Government-owned invention available for U.S. licensing and, possibly, for foreign licensing. Copy of patent available Commissioner of Patents, Washington, DC 20231 $1.50.
NTIS Prices: Not available NTIS
Country of Publication: United States
An **interferometer** for measuring **optical** surfaces is capable of very high sensitivity. A HeNe laser light is converted into a circular polarized **beam** , spatially filtered and collimated. The **light beam** is passed through a photoelastic **modulator** for modulating the relative phase of the two polarization states of the optical field of the beam. The beam is then passed through a ROCHON prism which **splits** the **beam** into two orthogonally polarized components. One beam is reflected off the optical surface that is being measured and is recombined with the undeviated beam. The resulting irradiance distribution oscillates in the modulation frequency and the phase of the oscillation is dependent upon the optical path difference between the two beams. The detected interference signal is processed to extract the phase information.
Descriptors: Patents; * **Optical interferometers** ; Phase modulation; Polarization; Surfaces; Optical properties; Measurement; Grazing; High sensitivity; Photoelasticity; Signal processing; Helium neon lasers
Identifiers: *PAT-CL-356-351; Circular polarization; Optical measurement; Surfaces; NTISGPN
Section Headings: 46C (Physics--Optics and Lasers); 90H (Government Inventions For Licensing--Optics and Lasers); 90G (Government Inventions For Licensing--Instruments)

21/TI/1 (Item 1 from file: 108)
DIALOG(R)File 108:(c) 2001 AIAA. All rts. reserv.

Optical multiple object tracking techniques

21/TI/2 (Item 1 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: Rapid defect inspection of display devices with optical spatial filtering

21/TI/3 (Item 2 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: Development of a spiral scanning type miniature optical image sensor using a silicon microscanner for recognition of an internal shape of a small pipe

21/TI/4 (Item 3 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: Parallel facial recognition system based on optical joint transform correlator

21/TI/5 (Item 4 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: Super-compact dual-axis optical scanning unit applying a torsional spring resonator driven by a piezoelectric actuator.

21/TI/6 (Item 5 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: INTRODUCTION TO COMPUTERIZED TOMOGRAPHY.

21/TI/7 (Item 6 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: COHERENT OPTICAL SCANNING ANALOG PROCESSOR.

21/TI/8 (Item 7 from file: 8)
DIALOG(R)File 8:(c) 2001 Engineering Info. Inc. All rts. reserv.

Title: Holographic character reader.

21/TI/9 (Item 1 from file: 35)
DIALOG(R)File 35:(c) 2001 UMI. All rts. reserv.

ANALYSIS OF REFLECTOR ANTENNA SYSTEMS FOR WIDE-ANGLE SCANNING (ANTENNA)

21/TI/10 (Item 1 from file: 202)
DIALOG(R)File 202:(c) INFORMATION TODAY, INC. All rts. reserv.

Holographic memory with angle, spatial and out-of-plane multiplexing.

21/TI/11 (Item 1 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts.

reserv.

Title: Large scale full color laser projection display

21/TI/12 (Item 2 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts. reserv.

Title: 200 inches full color laser projection display

21/TI/13 (Item 3 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts. reserv.

Title: Simultaneous optimization of dynamic multileaf collimation and scanning patterns **or compensation filters using a generalized pencil beam algorithm**

21/TI/14 (Item 4 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts. reserv.

Title: Optics and holography in the IBM supermarket scanner

21/TI/15 (Item 5 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts. reserv.

Title: Photon-operated projection X-ray microradiographs and their laser optical transforms

21/TI/16 (Item 6 from file: 2)
DIALOG(R)File 2:(c) 2001 Institution of Electrical Engineers. All rts. reserv.

Title: An adaptive on-line two-dimensional electro-optical spatial light modulator **for ODP**

21/TI/17 (Item 1 from file: 6)
DIALOG(R)File 6:Comp&distr 2000 NTIS, Intl Cpyrght All Right. All rts. reserv.

Phased Array Implementation Using Elements with Scan Capability
(Final Report)

21/TI/18 (Item 2 from file: 6)
DIALOG(R)File 6:Comp&distr 2000 NTIS, Intl Cpyrght All Right. All rts. reserv.

Liquid-Crystal Optical Correlator: A liquid-crystal television screen serves as a spatial light modulator
(NTIS Tech Note)

21/TI/19 (Item 3 from file: 6)
DIALOG(R)File 6:Comp&distr 2000 NTIS, Intl Cpyrght All Right. All rts. reserv.

Liquid-Crystal-Television Image Subtracters: Image data are processed quickly by optical components

(NTIS Tech Note)

21/TI/20 (Item 4 from file: 6)

Quantile Vocoder: Parameters of the spectral envelope are obtained statistically

21/5/1 (Item 1 from file: 108)
DIALOG(R)File 108:AEROSPACE DATABASE

01823537 A89-53329

Optical multiple object tracking techniques

LIU, HUA-KUANG; CHAO, TIEN-HSIN (California Institute of Technology, Jet Propulsion Laboratory, Pasadena)
Jet Propulsion Lab., California Inst. of Tech., Pasadena.
CORPORATE CODE: JJ574450

IN: Real-time signal processing for industrial applications; Proceedings of the Meeting, Dearborn, MI, June 27, 28, 1988. Bellingham, WA, Society of Photo-Optical Instrumentation Engineers (SPIE Proceedings. Volume 960), 1989, p. 30-43.
1989 29 REFS.
LANGUAGE: English
COUNTRY OF ORIGIN: United States COUNTRY OF PUBLICATION: United States
DOCUMENT TYPE: CONFERENCE PAPER
DOCUMENTS AVAILABLE FROM AIAA Technical Library
JOURNAL ANNOUNCEMENT: IAA8923

Two multichannel multiple-object tracking techniques are reviewed. In the diffraction grating technique, the input scene is picked up by a TV camera and imaged onto a liquid-crystal light valve (LCLV), and the output side of the light valve is illuminated with a suitably polarized and **collimated** coherent laser **beam** to yield a reflected **beam** with **polarization modulated** according to the intensity of the incoherent input. This reflected beam passes through a **beam splitter** cube and an analyzer, resulting in an intensity modulated coherent image. An array of spectrum islands containing the information of the input appears after crossing a contact screen/lens combination. In the multiple-focus hololens technique, the scene of moving objects is sent into the LCTVSLM through a camera; a **collimated** laser **beam** is incident upon the LCTV screen; a low-pass filter is inserted between the LCTVSLM and the hololens for the removal of the high order diffractions due to the grid structure of the LCTV. The feasibility of the LCTVSLM and multiple-focus hololens technique is demonstrated (C.E.)

SOURCE OF ABSTRACT/SUBFILE: AIAA
DESCRIPTORS: GRATINGS (SPECTRA); *HOLOGRAPHY; *MATCHED FILTERS; *PARALLEL PROCESSING (COMPUTERS); * **PATTERN RECOGNITION** ; *TRACKING (POSITION; AUTOCORRELATION; CHARGE COUPLED DEVICES; COLLIMATION; FOURIER TRANSFORMATION; LASER BEAMS; LOW PASS FILTERS; SPATIAL FILTERING
SUBJECT CLASSIFICATION: 7535 Instrumentation & Photography (1975-)

21/5/4 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04833615 E.I. No: EIP97103847261
Title: Parallel facial recognition system based on optical joint transform correlator
Author: Kodate, Kashiko; Hashimoto, Asako; Takahashi, Yuka; Thapliya, Roshan; Kamiya, Takeshi
Corporate Source: Japan Women's Univ, Tokyo, Jpn
Conference Title: Proceedings of the 1997 Pacific Rim Conference on Lasers and Electro-Optics, CLEO/Pacific Rim
Conference Location: Chiba, Jpn Conference Date: 19970714-19970718
Sponsor: IEEE
E.I. Conference No.: 46984
Source: Pacific Rim Conference on Lasers and Electro-Optics, CLEO - Technical Digest 1997. IEEE, Piscataway, NJ, USA. p 276-277
Publication Year: 1997
CODEN: 002223
Language: English
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
Journal Announcement: 9711W3
Abstract: A new 5-channel binary zone plate array (BZPA) design was developed to accelerate the processing speed in a parallel joint transform correlator (JTC) for real time facial recognition. A **collimated** He-Ne laser **beam** illuminates facial images displayed on an electronically addressed spatial **light modulator** interfaced with a computer. Tests showed that the ability of the parallel facial recognition system in distinguishing a registered person from a non-registered one is five times faster than that of conventional methods. 3 Refs.
Descriptors: **Pattern recognition** systems; Optical correlation; Laser applications; Fourier **optics** ; Fourier transforms; **Light modulation** ; Parallel **processing** systems
Identifiers: Parallel facial recognition system; Joint transform correlator
Classification Codes:
741.1 (Light/Optics); 744.9 (Laser Applications); 921.3 (Mathematical Transformations); 722.4 (Digital Computers & Systems)
741 (Optics & Optical Devices); 744 (Lasers); 921 (Applied Mathematics); 722 (Computer Hardware)
74 (OPTICAL TECHNOLOGY); 92 (ENGINEERING MATHEMATICS); 72 (COMPUTERS & DATA PROCESSING)

File 347:JAPIO Oct 1976-2000/Dec(UPDATED 010412)
(c) 2001 JPO & JAPIO
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200123
(c) 2001 Derwent Info Ltd

Set	Items	Description
S1	25220	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR SCAN? OR INSPECT? OR VERIF?)(3N)(PATTERN? ? OR ARRANGEMENT? ? OR OUTLINE? ? OR COMPOSITION? ? OR COMPOSE? ?)
S2	1	(BROADBAND OR BROAD()BAND)(2N)OPTIC?(2N)INTERFEROMET?
S3	1919	OPTIC?(3N)INTERFEROMET?
S4	9242	COLLIMAT?(3N)(LIGHT? OR BEAM?)
S5	33450	(SPLIT? OR DIVID?)(3N)(LIGHT? ? OR BEAM? ?)
S6	29969	MODULAT?(5N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S7	10848	SHIFT?(3N)FREQUENC???
S8	997	(ACOUSTO()OPTIC? OR ACOUSTOOPTIC?)(2N)MODULAT?
S9	27046	(POLARIZ? OR POLARIS?)(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S10	67127	(REFLECT? ? OR REFLECTING OR REDIRECT? ? OR REDIRECTING OR RE()(DIRECT? ? OR DIRECTING))(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?) OR DIRECT?(3N)COUPL???
S11	40287	SCAN?(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S12	2104	OPTIC?(3N)PROCESS?(3N)(ENERG??? OR LIGHT? ? OR BEAM? ? OR RAY? ?)
S13	145	(FINGERNAIL? ? OR TOENAIL? ?)(3N)BED? ? OR NAILBED? ? OR NAIL? ?(3N)BED? ?
S14	12798	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR INSPECT? OR VERIF?)(3N)(PERSON?? OR SOMEONE OR ANYONE OR INDIVIDUAL? ? OR PEOPLE OR HUMAN? OR PERSONNEL OR IDENTIT???) OR BIOMETRIC?
S15	8	S1 AND S3
S16	84	S1 AND S4
S17	47	S16 AND S5:S12
S18	37	S17 AND PATTERN? ?
S19	45094	IC=G06K-009
S20	31	(S19 AND S4 AND S5:S12) NOT S17
S21	7	S20 AND PATTERN? ?
S22	18	S3 AND S4 AND S5:S6
S23	0	S22 AND (S19 OR S1)
S24	2	S3 AND S4 AND S5 AND S6
S25	1	S13 AND S14

2/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008159415
WPI Acc No: 1990-046416/199007
XRPX Acc No: N90-035612
Wavelength multiplexed optical position transducer system - has fabry-perot interferometer **connected to receive** broadband optical **signal from source**
Patent Assignee: SCHLUMBERGER IND LTD (SLMB); SCHLUMBERGER IND SA (SLMB)
Inventor: KREIT D; WILLSON J P
Number of Countries: 008 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 354732	A	19900214	EP 89307934	A	19890803	199007	B
JP 2088905	A	19900329	JP 89205565	A	19890808	199019	
GB 2225422	A	19900530	GB 8917688	A	19890802	199022	
US 4972077	A	19901120	US 89384630	A	19890725	199049	
GB 2225422	B	19921014	GB 8917688	A	19890802	199242	
EP 354732	B1	19921028	EP 89307934	A	19890803	199244	
DE 68903311	E	19921203	DE 603311	A	19890803	199250	
			EP 89307934	A	19890803		

Priority Applications (No Type Date): GB 8914269 A 19890621; GB 8818767 A 19880808; GB 8826746 A 19881116; GB 8917688 A 19890802
Cited Patents: A3...9036; GB 2179146; GB 2202936; GB 2209101; No-SR.Pub; EP 251632; US 4596466; US 4748686
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 354732	A	E	19		
Designated States (Regional): DE FR IT NL SE					
EP 354732	B1	E	12	G01D-005/26	
Designated States (Regional): DE FR IT NL SE					
DE 68903311	E			G01D-005/26	Based on patent EP 354732
GB 2225422	B			G01D-005/30	

Abstract (Basic): EP 354732 A
The optical transducer system comprises a broadband optical source, and a tunable filter in the form of a Fabry-Perot **interferometer** connected to receive a **broadband optical** signal from the source. The interferometer is repeatedly swept through its pass band by a control signal of triangular or sawtooth waveform, producing a swept wavelength optical signal for application to the transducer.
In one embodiment, the optical output signal from the transducer is compared with the output signal from the interferometer to decode it, while in another embodiment, a control loop maintains the output amplitude (intensity) of the broadband source substantially constant over the range of wavelengths used by the transducer, enabling a reference channel provided in the transducer to be used for decoding purposes.
ADVANTAGE - Reduced size and weight.
9/13
Title Terms: WAVELENGTH; MULTIPLEX; OPTICAL; POSITION; TRANSDUCER; SYSTEM; FABRY; PEROT; INTERFEROMETER; CONNECT; RECEIVE; BROADBAND; OPTICAL; SIGNAL; SOURCE
Derwent Class: P81; S02
International Patent Class (Main): G01D-005/26; G01D-005/30
International Patent Class (Additional): G01B-009/02; G02F-001/21; H01J-005/16; H01L-033/00; H04B-009/00; H04B-010/00
File Segment: EPI; EngPI

15/TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Wave-length scanning and interfering system and signal process method therefor

15/TI/2 (Item 2 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Object fringe pattern distinguishing **method from other fringe patterns in interferogram produced by interferometer - monitoring changes in irradiation of pixels in array on which interferogram is imaged with object in motion, and determining pixels irradiated by fringe pattern with object data**

15/TI/3 (Item 3 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Reflective acousto- optical interferometric **scanner for measuring and testing - uses two acousto-optical devices and photo detectors, one acting as fixed phase reference and other picks up test medium phase information as optical beam scans test area**

15/TI/4 (Item 4 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Laser optical **phase-shift** interferometric **system for profiling test surface topography - creating time-varying interference pattern by relative movement of test and reference surfaces and** identifying **max. contrast of** pattern **to avoid composition-dependent phase shift on reflection.**

15/TI/5 (Item 5 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Spatial light modulator - used in highly dynamic conoscopic holography system

15/TI/6 (Item 6 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Inspecting **periodic** pattern **for defects - checks for reunited amount of output images from two-beam** optical interferometer **NoAbstract Dwg 1a/8**

15/TI/7 (Item 7 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Measuring linear dimensions of micro-objects - by producing and splitting interference pattern and adding resultant light beams

15/TI/8 (Item 8 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Interferometer **phase detection for** optical **figure sensing - involves frequency shifting reference beam before combining with interrogation beam**

15/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011614830 **Image available**
WPI Acc No: 1998-031958/199803
XRPX Acc No: N98-025718

Reflective acousto- optical interferometric **scanner for measuring and testing - uses two acousto-optical devices and photo detectors, one acting as fixed phase reference and other picks up test medium phase information as optical beam scans test area**

Patent Assignee: UNIV CENT FLORIDA (UYFL-N)
Inventor: RIZA N A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5694216	A	19971202	US 96636506	A	19960425	199803	B

Priority Applications (No Type Date): US 96636506 A 19960425
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5694216	A		29	G01B-009/02	

Abstract (Basic): US 5694216 A

The scanner supplies coherent light which is split into two beams. A first acousto-optical device has a first channel for selectively deflecting a portion of the first beam in accordance with a first frequency in a first direction. A second channel selectively deflects a first portion of the second beam in accordance with a second frequency in first direction. The difference between the two frequencies is fixed.

A second acousto-optical device deflects a test beam, which is part of the first portion of the first beam, and a reference beam, which is part of the second portion of the second beam, in a second direction perpendicular to the first direction. The test beam passes through an area of the test medium in a two dimensional **scanning pattern** . A reflective element is positioned to reflect the test and reference beams back through the acousto-optical devices. The test and reference beams are detected and a signal processor generates an intermediate frequency signal from the test and reference beams, which bears phase and amplitude information of the test medium.

USE - For use in large variety of scientific, industrial and biomedical applications e.g. DNA detection, material thickness measurement, gas flow and temperature measurement, particle velocity measurement, rotation and stress measurement, surface structure characterisation, for testing of integrated electronic and optical circuits etc.

ADVANTAGE - Has high speed, non-mechanical, inertialess beam scanning capabilities, stationary interfering output beam pair, and has compact in-line design for minimising air turbulence and other unstable phase noise effects.

Dwg.2A/9

Title Terms: REFLECT; ACOUSTO; OPTICAL; INTERFEROMETER; SCAN; MEASURE; TEST ; TWO; ACOUSTO; OPTICAL; DEVICE; PHOTO; DETECT; ONE; ACT; FIX; PHASE; REFERENCE; PICK; UP; TEST; MEDIUM; PHASE; INFORMATION; OPTICAL; BEAM; SCAN; TEST; AREA
Derwent Class: S02; S03
International Patent Class (Main): G01B-009/02
File Segment: EPI

15/5/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX

001718274
WPI Acc No: 1977-F4765Y/197726
Interferometer **phase detection for** optical **figure sensing - involves frequency shifting reference beam before combining with interrogation beam**
Patent Assignee: US SEC OF NAVY (USNA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4030831	A	19770621				197726	B

Priority Applications (No Type Date): US 76669412 A 19760322

Abstract (Basic): US 4030831 A
The phase detection between interfering light beams in an interferometric system is accomplished by frequency shifting the reference beam prior to combination with the interrogation beam and electro-optically **scanning** the resulting **pattern** to produce an FM electrical signal.
This has the shift frequency as a carrier and the interrogated parameter as the modulation data.
A phase lock loop is responsive to the FM signal to provide a D.C. signal that is analogous of rate of change of the interrogated parameter with scan.
This is integrated to provide an outpout voltage signal that is proportional to the interrogated parameter and the corresponding optical phase difference
Title Terms: INTERFEROMETER; PHASE; DETECT; OPTICAL; FIGURE; SENSE; FREQUENCY; SHIFT; REFERENCE; BEAM; COMBINATION; INTERROGATION; BEAM
Derwent Class: P81
International Patent Class (Additional): G02B-009/02
File Segment: EngPI

18/TI/1 (Item 1 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

SCANNING OPTICAL DEVICE

18/TI/2 (Item 2 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

EXPOSURE APPARATUS AND METHOD

18/TI/3 (Item 3 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

PATTERN INSPECTING DEVICE

18/TI/4 (Item 4 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

WIRING **PATTERN INSPECTING** DEVICE

18/TI/5 (Item 5 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

OPTICAL SCANNING DEVICE

18/TI/6 (Item 6 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

PATTERN RECOGNITION DEVICE

18/TI/7 (Item 7 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

SCANNING PATTERN READER

18/TI/8 (Item 8 from file: 347)
DIALOG(R)File 347:(c) 2001 JPO & JAPIO. All rts. reserv.

BEAM PRINTER

18/TI/9 (Item 1 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Signature analysis apparatus for e.g. radar return processing for infrared target identification

18/TI/10 (Item 2 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Radiation imaging system for producing image of scanned object - has detector array arranged in plane oriented perpendicular to incident direction of beam and positioning device for maintaining centrally located detectors at position to intercept beam

18/TI/11 (Item 3 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Optical scanner for e.g. laser beam printer, laser scanning **micrometer,** pattern **generator - has scanning optical system which includes two lenses with independent-multiplying factor for** light **projections in** scanning-**sub-scanning direction**

18/TI/12 (Item 4 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Holographic optical memory for three-dimensional holographic storage system and processor - has segmented optical array with strip in different sub-array having optical path to same recording spot being separated by out-of-plane multiplexing difference angle subtended by path of reference beam

18/TI/13 (Item 5 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Multiple source optical scanner for use in retail check out and inventory control - separates different wavelengths of light and converts reflected light of each wavelength into electrical signals based upon intensities of reflected light

18/TI/14 (Item 6 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Laser scanning confocal microscope for detecting fluorescence under ultraviolet light - produces pulsed reference beam and uses it to produce clock signal representing instantaneous scan rate

18/TI/15 (Item 7 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Plate for surface position and inclination sensor optical system - has lens array comprising transparent plate and gradient index lenses linearly or two-dimensionally arranged in plate

18/TI/16 (Item 8 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Tracking and recovery system for gemstone identification - records optical response of gemstone fingerprints in data-bank, enabling software-controlled searches to be made w.r.t. individual gemstones

18/TI/17 (Item 9 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Mfg. plate for embossing - by casting transparent resins on materials, e.g. wood, exposing to collimated light **through moulds and forming plate using photographic** patterns

18/TI/18 (Item 10 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Laser scanner with extended working range - has laser source and scan mirror sepd. by optical element in form of figure of rotation such as axis-con

18/TI/19 (Item 11 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Circular cylindrical or conical surface testing appts. - directs collimated light beam **from Fizeau interferometer onto test surface and detects reflected light**

18/TI/20 (Item 12 from file: 350)

Forming fine pattern **by using a patterned resist layer - using collimated charged particle** ray **and** scanning **to form patterned resist layer induced from gas**

18/TI/21 (Item 13 from file: 350)

Reading device for wafer identifying pattern - collimates **laser** beam **uses mirror to** scan **laser** beam **and elongates beam along ID** pattern **NoAbstract Dwg 2/8**

18/TI/22 (Item 14 from file: 350)

Holographic scanning system e.g. the bar coded labels - collects light reflected from bar coded labels and collimated beams **are directed at lens for focussing**

18/TI/23 (Item 15 from file: 350)

CT scanner for radiation therapy planning - has pulsed photon beam scanned **over patient with detector array for transmitted photons producing image**

18/TI/24 (Item 16 from file: 350)

Wavelength scanning interferometer employing laser - has split collimated beam **providing reference and inspection beams**

18/TI/25 (Item 17 from file: 350)

Data storage system using optical tape - has acousto-optic deflector for scanning tape for both reading and writing

18/TI/26 (Item 18 from file: 350)

Photocopier permitting deletion and/or addition of information - applies scanning **laser** beam modulated **with original and with superposed data to electronic photograph processor**

18/TI/27 (Item 19 from file: 350)

Ocular fundus reflectivity pattern identification **appts. - has rotatable** scanner **to project IR** beam **on to choroidal vasculature**

18/TI/28 (Item 20 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Xerographic printer with high resolution - has modulated **laser** beam **focussed directly onto photosensitive layer**

18/TI/29 (Item 21 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Selectable colour beam projector - has prism, dispersing light in colour components directed to movable focusing lens

18/TI/30 (Item 22 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Optical leverage telecentric scanning appts. - has detector on opposite side of transparency to refraction device for optical resolution of scanning **laser** beam

18/TI/31 (Item 23 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Scanning beam **optical target position determining system - has reference photoelectric sensors detecting portions of periodically sweeping target beams**

18/TI/32 (Item 24 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Two-dimensional scanning device - has arrangement to obtain distortion free two-dimensional scanning pattern **on** scanning **plant**

18/TI/33 (Item 25 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Two-dimensional scanning appts. - eliminates distortion using scanning light beam **spot moved at uniform speed in two directions**

18/TI/34 (Item 26 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Holographic scanner for sensing product bar code labels - generates two spatially displaced checking patterns **to provide larger gate through which label must pass**

18/TI/35 (Item 27 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Optical multiplying, dividing and series expansion unit for computing - with light flux from divider **passed through** beam splitter **and filters to** light divider **and** collimator

18/TI/36 (Item 28 from file: 350)
DIALOG(R)File 350:(c) 2001 Derwent Info Ltd. All rts. reserv.

Omnidirectional scanning system for randomly orientated labels - uses disc carrying several halograms to produce multiple cross scanning pattern **of laser**

18/TI/37 (Item 29 from file: 350)

Polished gem-stones identification appts. - has collimated **parallel** light beam **source with projecting lens**

18/5/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

04074418 **Image available**
WIRING **PATTERN** **INSPECTING** DEVICE

PUB. NO.: 05-066118 [JP 5066118 A]
PUBLISHED: March 19, 1993 (19930319)
INVENTOR(s): HASHINAMI SHINJI
ANDO MORITOSHI
HIZUKA TETSUO
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 03-227396 [JP 91227396]
FILED: September 06, 1991 (19910906)
INTL CLASS: [5] G01B-011/24; H05K-003/00
JAPIO CLASS: 46.1 (INSTRUMENTATION -- Measurement); 42.1 (ELECTRONICS -- Electronic Components)
JAPIO KEYWORD:R002 (LASERS)
JOURNAL: Section: P, Section No. 1576, Vol. 17, No. 387, Pg. 43, July 20, 1993 (19930720)

ABSTRACT

PURPOSE: To highly precisely measure thickness and waviness information by providing a second converging means with the principal point being conformed to the posterior focus position of a first converging means, and providing at least two optical position detecting means in the posterior focus position and in the front and rear of it.

CONSTITUTION: In a wiring **pattern** **inspecting** device, the **collimated** laser **beam** from a laser generating device 5 is expanded by a laser expander 6, entered to a polygonal scanner 8, throttled by a scanning lens 9, and emitted to a substrate 13 to be inspected at a determined angle. The reflected light is imaged on a semiconductor position detecting element(PSD) 34 by a first converging lens 31 and a second converging lens 32. The **light** is **divided** there into two and converged on a second PSD 35. It is important here to place the PSD 34 on an imaging surface (the rear focus position of the lens 32) and the PSD 35 in a place other than this point. The outputs of the PSD 34, 35 are passed through amplifiers 35a, 35b, 40a, 40b, the imaging position is calculated in first and second height arithmetic circuits 36, 41 to determine the height, and information such as waviness and brightness is successively determined.

18/5/6 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO

03545286 **Image available**
PATTERN RECOGNITION DEVICE

PUB. NO.: 03-208186 [JP 3208186 A]
PUBLISHED: September 11, 1991 (19910911)
INVENTOR(s): KOJIMA KEISUKE
TAI SHUICHI
HISAMA KAZUO
HARA KUNIHIKO
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 02-002856 [JP 902856]
FILED: January 10, 1990 (19900110)
INTL CLASS: [5] G06F-015/70; G06K-009/74
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 45.3 (INFORMATION PROCESSING -- Input Output Units)
JAPIO KEYWORD:R002 (LASERS); R009 (HOLOGRAPHY); R012 (OPTICAL FIBERS)
JOURNAL: Section: P, Section No. 1285, Vol. 15, No. 483, Pg. 34, December 06, 1991 (19911206)

ABSTRACT

PURPOSE: To process the fine change of a **pattern** at high speed by non-linearizing a **recognized pattern** converted into an optical **pattern** , and after moving it in parallel, converting it again into the **pattern** .

CONSTITUTION: Light emitted from a laser 1 is turned into parallel **light** by a **collimator** lens 2, and is given to a space **light modulator** 3, and the intensity **pattern** of the parallel light is changed. This light is two-dimensional-Fourier- transformed by a Fourier transformation lens 4, and further, it is inputted to a coordinate transforming element 5, and is polar-coordinate.logarithm- transformed. At that time, the transformation that rotation around an origin becomes parallel displacement to an angle direction on an output plane in the element 5 and shift is constant in the lens 4 is executed. Then, the output of the element 5 is Fourier-transformed again through the lens 4, and is received by a camera 6. Thus, the transformation constant for the fine shift, the rotation, the enlargement and the reduction of the **pattern** can be realized, and the fine change of the **pattern** can be **recognized** and processed at high speed.

18/5/9 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012554032 **Image available**
WPI Acc No: 1999-360138/199931
XRPX Acc No: N99-268282

Signature analysis apparatus for e.g. radar return processing for infrared target identification

Patent Assignee: GEC-MARCONI LTD (MAON)
Inventor: GRATZE S C; LAYCOCK L C

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2332545	A	19990623	GB 9726694	A	19971217	199931	B

Priority Applications (No Type Date): GB 9726694 A 19971217
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2332545	A		23	G06E-003/00	

Abstract (Basic): GB 2332545 A

NOVELTY - A **collimated light beam** (15) is used to illuminate an optical modulator (13) arranged to form a characteristic signature (19). The signature is formed by the diffraction of the **beam** as a function of a **modulation** signal applied to the modulator. A correlator, with holographic filter reference mask (25), is arranged to correlate each signature with a reference signature to form a correlation signal (28).

DETAILED DESCRIPTION - The correlator arranged to correlate each of the characteristic signals from the optical modulator with the reference signal. The reference signal is generated by the reference mask in the correlator. The holographic filter mask contains a number of reference signals generated in optical form and a Fourier transform lens to form each of the correlation signals. The output of the correlator is a resultant correlation signal that is passed to a detector (29) to produce an electrical signal (30) proportional to the magnitude of the correlation signal.

USE - For processing of radar returns corresponding to at least one target to provide identification of that targeted body. A potential application is for seeker head or smart munitions sensors where in-target range profiling could be used for target identification and prioritization. Can be used as a scale invariant partner to current infrared techniques or as an independent source of target recognition. May also be used for **identifying** any **pattern** of electronic signals in, for example, telecommunications and sensor applications.

ADVANTAGE - The apparatus provides a way of identifying targets in real-time, and offers deployment features where weight , power consumption and volume are critical considerations.

DESCRIPTION OF DRAWING(S) - An illustration of the optical path through the apparatus.

Optical modulator (13)
Collimated light beam (15)
Characteristic signature (19)
Reference mask (25)
Correlation signal (28)
Detector (29)
Electrical signal (30)
pp; 23 DwgNo 1/8

Title Terms: SIGNATURE; ANALYSE; APPARATUS; RADAR; RETURN; PROCESS; INFRARED; TARGET; IDENTIFY
Derwent Class: S01; T02; V07; W06; W07
International Patent Class (Main): G06E-003/00
File Segment: EPI

18/5/15 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009131721 **Image available**
WPI Acc No: 1992-259160/199231
Related WPI Acc No: 1992-023597
XRPX Acc No: N92-197709

Plate for surface position and inclination sensor optical system - has lens array comprising transparent plate and gradient index lenses linearly or two-dimensionally arranged in plate

Patent Assignee: NIPPON SHEET GLASS CO LTD (NIPG)
Inventor: HAMANAKA K

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5130852	A	19920714	US 90554729	A	19900718	199231	B
			US 91655339	A	19910213		

Priority Applications (No Type Date): JP 89192160 A 19890725
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5130852	A		7	G01J-001/08	Div ex application US 90554729 Div ex patent US 5074649

Abstract (Basic): US 5130852 A

The surface position/inclination sensor optical system includes a single laser source for emitting a single laser beam. The laser **beam** is **collimated** . A plane with lens array includes a substrate and a number of lenses, at least two of which have different focal lengths. The number of lenses are integrally arranged in the substrate so as to be linearly or two dimensionally arrayed. The **collimated beam** is incident at a right angle on the plate and on the lenses so as to be focused on a surface to be tested. The surface to be tested is movable or inclinable only to a direction of optical axes of the lenses.

A **beam splitter splits** the **beam** which is reflected or scattered on the surface to be tested, the reflected beam passing through the lenses. The **splitted beam** is focussed from the splitter. A photosensor senses a light intensity of the beam focused through the focusing device. The light intensity derived from one of the lenses is compared with that derived from the other of the lenses.

USE/ADVANTAGE - Character and **pattern recognition** , position/inclination sensor. Lens array is easily and precisely aligned.

Dwg.3/5

Title Terms: PLATE; SURFACE; POSITION; INCLINATION; SENSE; OPTICAL; SYSTEM; LENS; ARRAY; COMPRISE; TRANSPARENT; PLATE; GRADIENT; INDEX; LENS; LINEAR; TWO; DIMENSION; ARRANGE; PLATE
Index Terms/Additional Words: CHARACTER; **PATTERN** ; RECOGNITION; POSITION; SENSOR; INCLINATION
Derwent Class: P81; S02; T04; V07
International Patent Class (Main): G01J-001/08
File Segment: EPI; EngPI

18/5/18 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008920806 **Image available**
WPI Acc No: 1992-048075/199206
XRPX Acc No: N92-036579
Laser scanner with extended working range - has laser source and scan mirror sepd. by optical element in form of figure of rotation such as axis-con
Patent Assignee: SYMBOL TECHNOLOGIES INC (SYMB-N)
Inventor: KATZ J; KONFORTI N; MAROM E; SPITZ G
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5080456	A	19920114	US 90486005	A	19900226	199206	B

Priority Applications (No Type Date): US 90486005 A 19900226

Abstract (Basic): US 5080456 A

A bar code **scanner** comprises a **light** source for directing a **collimated beam** of **light** in a path toward a symbol to be scanned, and a moving optical element in the path to cause the beam of light to move along a scan line. An optical unit in the path creates a spot of light defined by the beam, having a size related to the size of features of the symbol to be **scanned** . The **beam** of **light** exhibits the spot size over a substantial distance along an axis of the beam, the optical unit including a slit in the path perpendicular to the axis of the beam.

A light detector is positioned to receive light reflected from the symbol. The light source is a laser. The optical element is solid in the shape of a figure formed by rotation of a line about an axis, the line being at an angle to the axis. The figure is a linear axicon, and the beam of light is refracted by the optical element.

USE/ADVANTAGE - A bar code scanner, more particularly a laser imaging system for generating a laser **beam scan pattern** with an extended depth of focus or working range, esp. for reading bar code symbols appearing on a label or on the surface of an article. (11pp Dwg.No.1A/10)

Title Terms: LASER; SCAN; EXTEND; WORK; RANGE; LASER; SOURCE; SCAN; MIRROR; SEPARATE; OPTICAL; ELEMENT; FORM; FIGURE; ROTATING; AXIS
Derwent Class: P81; T04
International Patent Class (Additional): G02B-026/10
File Segment: EPI; EngPI

18/5/19 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008144141 **Image available**
WPI Acc No: 1990-031142/199005
XRPX Acc No: N90-023987
Circular cylindrical or conical surface testing appts. - directs collimated light beam from Fizeau interferometer onto test surface and detects reflected light
Patent Assignee: EASTMAN KODAK CO (EAST)
Inventor: CLEAVELAND E
Number of Countries: 004 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 352535	A	19900131	EP 89112595	A	19890710	199005	B
US 4898470	A	19900206	US 88218756	A	19880712	199012	

Priority Applications (No Type Date): US 88218756 A 19880712
Cited Patents: AT 164460; US 3542473
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 352535	A	E	17		
Designated States (Regional): DE GB NL					
US 4898470	A		11		

Abstract (Basic): EP 352535 A

A **collimated light beam** from a Fizeau interferometer (34) is directed axially onto a specularly reflective conical surface (28) of a member (20) which **reflects** the **light** onto the surface to be tested.

The surface to be tested, directly or indirectly **reflects** the **light** onto the conical specularly reflective surface which, in turn, reflects it back towards the interferometer, information on the trueness of the surface to be tested can be gained from **inspection** of the **pattern** of the interference between light projected by the interferometer and light reflected back to the interferometer.

USE/ADVANTAGE - Optical elements or metal components. Hight degree of accuraty

Title Terms: CIRCULAR; CYLINDER; CONICAL; SURFACE; TEST; APPARATUS; DIRECT; COLLIMATE; LIGHT; BEAM; FIZEAU; INTERFEROMETER; TEST; SURFACE; DETECT; REFLECT; LIGHT
Derwent Class: S02
International Patent Class (Additional): G01B-009/02; G01B-011/24
File Segment: EPI

18/5/26 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004211065
WPI Acc No: 1985-037945/198506
XRPX Acc No: N85-028163

Photocopier permitting deletion and/or addition of information - applies scanning laser beam modulated with original and with superposed data to electronic photograph processor

Patent Assignee: TOKYO SHIBAURA DENKI KK (TOKE)
Inventor: NAGOH C

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4495521	A	19850122	US 82421280	A	19820922	198506	B

Priority Applications (No Type Date): JP 7885627 A 19780713
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4495521	A		6		

Abstract (Basic): US 4495521 A

The electronic copying apparatus includes a laser beam generator (2) and a **beam splitter** (4). A focus/collimator (10) receives the laser beam which has been directed in one first direction by the splitter and focuses and sets the beam on an original (8) laid on a table (6).

The original (8) is **scanned** in a raster **pattern** , using the laser beam coming from the focus/**collimator** . The laser **beam** directed in the other direction by the splitter is transferred to an electronic photograph processor through a **light modulator** (14) a focus/**collimator** (16) and a **beam** deflector (18). External data are superposed on the data corresponding to the electric signal, from a photoelectric converters and the exposure laser **beam** is **modulated** according to the superposed data, thus making a copy containing the external data in addition to the information on the original.

1/3

Title Terms: PHOTOCOPY; PERMIT; DELETE; ADD; INFORMATION; APPLY; SCAN; LASER; BEAM; MODULATE; ORIGINAL; SUPERPOSED; DATA; ELECTRONIC; PHOTOGRAPH ; PROCESSOR
Derwent Class: S06; W02
International Patent Class (Additional): H04N-001/38
File Segment: EPI

21/TI/1 (Item 1 from file: 347)

RUGGEDNESS DETECTOR

21/TI/2 (Item 1 from file: 350)

Portable bar code scanning unit including surveillance tag deactivator - using label scanner and sensor with processing to detect and read bar codes and then generate deactivating signal

21/TI/3 (Item 2 from file: 350)

Multiple channel optical correlator system - focuses individually converging beams using holographic lens and diverging beams using correcting optical elements

21/TI/4 (Item 3 from file: 350)

Real-time optical multiple object recognition and tracking appts. - uses multipoint spatial filters to pre-define objects to be recognised at run-time

21/TI/5 (Item 4 from file: 350)

Selection of object features for image recognition - by passing collimated light **through cassette of standard optical density cards for rapid optical matching**

21/TI/6 (Item 5 from file: 350)

Optical system for reading finger images - has laser to provide coherent light beam to illuminate finger, and photocells to receive light reflected from finger

21/TI/7 (Item 6 from file: 350)

Scanner for coded price labels - intersecting beams read label at any angle of presentation
?

21/5/4 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007742655
WPI Acc No: 1989-007767/198901
XRPX Acc No: N89-005786
Real-time optical multiple object recognition and tracking appts. - uses multipoint spatial filters to pre-define objects to be recognised at run-time
Patent Assignee: NAT AERO & SPACE ADMIN (USAS)
Inventor: CHAO T; LIU H K
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 7154718	A	19881115	US 87154718	A	19871210	198901	B
US 4924507	A	19900508	US 88154718	A	19880211	199023	

Priority Applications (No Type Date): US 88154718 A 19880211; US 87154718 A 19871210
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 7154718	A		18		

Abstract (Basic): US 7154718 A

A **beam splitter** (24) is disposed to aplit a coherent laser beam (48) into object (26) and reference (28) beams. **Beam** expanders (50) and **collimators** (52) are positioned to transform the beams (26, 28) into coherent **collimated light beams** (26', 28'). A two-dimensional spatial **light modulator** (54) is disposed in the object **beam** (26') to **modulate** the object **beam** (26') with optical information as a function of signals connected to X and Y inputs.

A first t.v. camera (16) develops X and Y signals reflecting the contents of its field of vision. The X and Y signals are connected to the X and Y inputs of the two-dimensional spatial **light modulator** (54). A hololens (38) is positioned in the object beam (26') subsequent to the two-dimensional spatial **light modulator** (54) to focus the object **beam** (26') at a set of focal points (42). A planar transparency-forming film (32) is disposed exposable to form a multiple position interference filter.

USE/ADVANTAGE - Replaces time, space and cost-intensive digital techniques. Can also recognise multiple orientations of single object. This capability has potential for space applications where space and wt. are at a premium.

4/7

Title Terms: REAL-TIME; OPTICAL; MULTIPLE; OBJECT; RECOGNISE; TRACK; APPARATUS; MULTIPOINT; SPACE; FILTER; PRE; DEFINE; OBJECT; RECOGNISE; RUN ; TIME
Derwent Class: T04
International Patent Class (Additional): G06K-000/01; **G06K-009/76**
File Segment: EPI

24/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012125897 **Image available**
WPI Acc No: 1998-542809/199846
Related WPI Acc No: 1996-117127; 1996-354054; 1996-356760; 1997-332907; 1997-341805; 1997-366718; 1997-535865; 1999-024001; 1999-106277; 1999-166629; 1999-357203; 2000-183136; 2000-195320; 2000-422445
XRPX Acc No: N98-422503

Spectral intensity measuring method e.g. for images - collecting incident light from scene and scanning incident light which is passed through interferometer which outputs modulated light **corresponding to predetermined set of linear combinations of spectral intensity of emitted light**

Patent Assignee: APPLIED SPECTRAL IMAGING LTD (SPEC-N)
Inventor: BUCKWALD R A; CABIB D; FRIEDMAN Z; LIPSON S G
Number of Countries: 081 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9844314	A1	19981008	WO 98IL159	A	19980401	199846	B
AU 9867449	A	19981022	AU 9867449	A	19980401	199910	

Priority Applications (No Type Date): US 97831380 A 19970401
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9844314	A1	E	39	G01B-009/02	

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL PT SD SE SZ UG ZW

AU 9867449	A		Based on patent WO 9844314

Abstract (Basic): WO 9844314 A

The method involves collecting incident light simultaneously from all points of a two- dimensional scene using collimating optics. A portion of the incident **collimated light** is passed through an interferometer system having a number of elements so that the **light** is **split** into several coherent **beams** which travel along different **optical** paths inside the **interferometer** and then the coherent beams recombine to interfere with each other to form an exiting light.

The exiting light is passed through a focusing optical system which focuses the exiting light on a detector having an array of detector elements. One of elements of the interferometer system is translated, so that an instantaneous optical path difference between the coherent beams generated by the interferometer system is scanned simultaneously for all the pixels of the scene where the portion of the **collimated light** originates, so that during the translating of the at least one element each of detector elements receives the image of one and only one pixel of the scene, so that at least a portion of the real image of the scene is stationary on the detector array at any time during the translating the image being still visible and recognizable. Each detector element produces a signal which is a particular linear combination of light intensity emitted by the pixel at different wavelengths, where the linear combination is a function of the instantaneous optical path difference. The signals of each detector elements are recorded as function of time suing a recording device.

USE - For simultaneously measuring spectral intensity as function of wavelength of all pixels of two-dimensional scene while detecting real and stationary image of scene.

ADVANTAGE - Utilises information available from collected incident light of image to decrease required frame time and increase signal-to-noise ratio.

Dwg.2/7
Title Terms: SPECTRAL; INTENSITY; MEASURE; METHOD; IMAGE; COLLECT; INCIDENT

24/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004019555
WPI Acc No: 1984-165097/198426
XRPX Acc No: N84-122896
Phase modulating polarising interferometer **measuring** optical **surfaces - in which resulting irradiance distribution oscillates in modulation frequency and phase of oscillation depends on path difference**
Patent Assignee: US SEC OF NAVY (USNA)
Inventor: BAREKET N; METHENY W W
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6395769	A	19840403	US 82395769	A	19820706	198426	B
US 4480916	A	19841106				198447	

Priority Applications (No Type Date): US 82395769 A 19820706
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6395769	A		14		

Abstract (Basic): US 4480916 A

A HeNe laser light is converted into a circular polarised **beam** , spatially filtered and collimated. The **light beam** is passed through a photoelastic **modulator** for modulating the relative phase of the two polarisation states of the optical field of the beam. The beam is then passed through a ROCHON prism which **splits** the **beam** into two orthogonally polarised components. One beam is reflected off the optical surface that is being measured and is recombined with the undeviated beam.

The resulting irradiance distribution oscillates in the modulation frequency and the phase of the oscillation is dependent upon the optical path difference between the two beams. The detected interference signal is processed to extract the phase information.

USE/ADVANTAGE - Measuring optical surfaces. High sensitivity. (7pp

Title Terms: PHASE; MODULATE; POLARISE; INTERFEROMETER; MEASURE; OPTICAL; SURFACE; RESULT; IRRADIATE; DISTRIBUTE; OSCILLATING; MODULATE; FREQUENCY; PHASE; OSCILLATING; DEPEND; PATH; DIFFER
Index Terms/Additional Words: GRAZING; INCIDENCE; IRRADIATE
Derwent Class: S02
International Patent Class (Additional): G01B-009/02
File Segment: EPI

25/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011880335 **Image available**
WPI Acc No: 1998-297245/199826
XRPX Acc No: N98-232589
Identification **apparatus for** recognising individuals **by** nail beds **of their finger** nails **- includes photodetector sensor which senses amplitudes of beams of reflected light which are converted to digital representations which are stored in computer**
Patent Assignee: GORMLEY A (GORM-I); KUPERSCHMIDT V (KUPE-I); TOPPING A (TOPP-I)
Inventor: GORMLEY A; KUPERSCHMIDT V; TOPPING A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5751835	A	19980512	US 95538918	A	19951004	199826	B

Priority Applications (No Type Date): US 95538918 A 19951004
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5751835	A		14	G06K-009/00	

Abstract (Basic): US 5751835 A

The identification apparatus includes light sources for providing beams of light. A modulator modulates the amplitudes of the light sources at respective frequencies. A lens focuses the beams of light. The light beams are coupled to the lens. A sensing port is coupled to an input port and an output port for illuminating a discrete portion of the **individual** for **identification** with the beams of light and sensing a corresponding series of beams of the light reflected from the discrete portion.

A photodetector sensor, sense the amplitudes of the beams of reflected light. An analog-to-digital converter converts the output of the photodetector sensor to the digital representations of the amplitudes. A computer stores the results of the digital representation of the amplitudes in a form which uniquely **identifies** the **individual** .

USE - For rapid **identification** of **individuals** .

ADVANTAGE - Is inexpensive, does not carry social stigma of law enforcement. Does not require storage or manipulation of vast amounts of data. Is neither cumbersome or intrusive.

Dwg.8/11a
Title Terms: IDENTIFY; APPARATUS; RECOGNISE; INDIVIDUAL; NAIL; BED; FINGER; NAIL; PHOTODETECTOR; SENSE; SENSE; AMPLITUDE; BEAM; REFLECT; LIGHT; CONVERT; DIGITAL; REPRESENT; STORAGE; COMPUTER
Derwent Class: S03; S05; T01; T05
International Patent Class (Main): G06K-009/00
File Segment: EPI

File 348:EUROPEAN PATENTS 1978-2001/APR W05
(c) 2001 European Patent Office
File 349:PCT Fulltext 1983-2001/UB=20010419, UT=20010405
(c) 2001 WIPO/MicroPat

Set	Items	Description
S1	26526	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR SCAN? OR INSPECT? OR VERIF?)(3N)(PATTERN? ? OR ARRANGEMENT? ? OR OUTLINE? ? OR COMPOSITION? ? OR COMPOSE? ?)
S2	7	(BROADBAND OR BROAD()BAND)(2N)OPTIC?(2N)INTERFEROMET?
S3	1718	OPTIC?(3N)INTERFEROMET?
S4	8694	COLLIMAT?(3N)(LIGHT? OR BEAM?)
S5	14158	(SPLIT? OR DIVID?)(3N)(LIGHT? ? OR BEAM? ?)
S6	15422	MODULAT?(5N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S7	9801	SHIFT?(3N)FREQUENC???
S8	1008	(ACOUSTO()OPTIC? OR ACOUSTOOPTIC?)(2N)MODULAT?
S9	11774	(POLARIZ? OR POLARIS?)(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S10	44412	(REFLECT? ? OR REFLECTING OR REDIRECT? ? OR REDIRECTING OR RE()(DIRECT? ? OR DIRECTING))(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?) OR DIRECT?(3N)COUPL???
S11	17472	SCAN?(3N)(LIGHT? ? OR BEAM? ? OR RAY? ?)
S12	1917	OPTIC?(3N)PROCESS?(3N)(ENERG??? OR LIGHT? ? OR BEAM? ? OR RAY? ?)
S13	272	(FINGERNAIL? ? OR TOENAIL? ?)(3N)BED? ? OR NAILBED? ? OR NAIL? ?(3N)BED? ?
S14	28518	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR INSPECT? OR VERIF?)(3N)(PERSON?? OR SOMEONE OR ANYONE OR INDIVIDUAL? ? OR PEOPLE OR HUMAN? OR PERSONNEL OR IDENTIT???) OR BIOMETRIC?
S15	1	S1 AND S2
S16	1	S2 AND S4
S17	9771	S1/TI,AB,CM OR IC=G06K-009
S18	162	S4(S)S5:S12 AND S17
S19	13943	(IDENTIF? OR RECOGNI? OR DISTINGUISH? OR MAK???(2N)OUT OR SCAN? OR INSPECT? OR VERIF?)(3N)PATTERN? ?
S20	29	S19/TI,AB AND S18
S21	165	S4(S)S5(S)S6
S22	14	S3 AND S21
S23	1	S13(S)S14

2/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00481543
Large signal three-level superfluorescent fiber sources
Superfluoreszierende Dreiniveau-Faserlichtquellen von hoher Ausgangsleistung
Sources superfluorescentes a trois niveaux a haute puissance en fibre optique
PATENT ASSIGNEE:
THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, (242259), 857 Serra Street, 2nd Floor, Stanford, California 94305-6225, (US), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
Kalman, Robert F., 785 Pinon Court, Sunnyvale, California 94086, (US)
Digonnet, Michael J. F., 2307 Harvard Street, Palo Alto, California 93406, (US)
Wysocki, Paul F., 123-F Escondido Village, Stanford, California 94305, (US)
LEGAL REPRESENTATIVE:
Maury, Richard Philip et al (52806), Sommerville & Rushton 11 Holywell Hill, St. Albans Herts. AL1 1EZ, (GB)
PATENT (CC, No, Kind, Date): EP 476800 A2 920325 (Basic)
EP 476800 A3 921230
EP 476800 B1 960228
APPLICATION (CC, No, Date): EP 91302184 910314;
PRIORITY (CC, No, Date): US 584806 900918; US 666264 910307
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: H01S-003/06; G01C-019/72;
ABSTRACT WORD COUNT: 84

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	748
CLAIMS B	(English)	EPAB96	598
CLAIMS B	(German)	EPAB96	534
CLAIMS B	(French)	EPAB96	673
SPEC A	(English)	EPABF1	10179
SPEC B	(English)	EPAB96	9651
Total word count - document A			10927
Total word count - document B			11456
Total word count - documents A + B			22383

...SPECIFICATION The present invention advantageously uses this unexpected characteristic of three-level systems.
Sensor Applications
The source of the present invention is particularly useful as a **broadband optical** source for an **optical interferometer** sensor such as a rotation sensor. An exemplary rotation sensor 1500 that can be advantageously used in combination with the source of the present invention...

...SPECIFICATION The present invention advantageously uses this unexpected characteristic of three-level systems.

Sensor Applications
The source of the present invention is particularly useful as a **broadband optical** source for an **optical interferometer** sensor such as a rotation sensor. An exemplary rotation sensor 1500 that can be advantageously used in combination with the source of the present invention...

2/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00368095

Optical transducer systems.
Optische Sensorsysteme.
Systemes de capteurs optiques.

PATENT ASSIGNEE:
SCHLUMBERGER INDUSTRIES LIMITED, (515911), 124 Victoria Road, Farnborough Hampshire, GU14 7PW, (GB), (applicant designated states: DE;FR;IT;NL;SE)
INVENTOR:
Willson, Jolyon Peter, 20 Kintbury, Duxford Cambridge, CB2 4RR, (GB)
Kreit, Darran, 16 Oakpiece, Welwyn Hertfordshire, AL6 0XE, (GB)
LEGAL REPRESENTATIVE:
Stoole, Brian David et al (36412), Schlumberger Industries Limited 124 Victoria Road, Farnborough Hampshire GU14 7PW, (GB)

PATENT (CC, No, Kind, Date): EP 354732 A2 900214 (Basic)
EP 354732 A3 900905
EP 354732 B1 921028
APPLICATION (CC, No, Date): EP 89307934 890803;
PRIORITY (CC, No, Date): GB 8818767 880808; GB 8826746 881116; GB 8914269 890621
DESIGNATED STATES: DE; FR; IT; NL; SE
INTERNATIONAL PATENT CLASS: G01D-005/26;
ABSTRACT WORD COUNT: 143

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1536
CLAIMS B	(German)	EPBBF1	572
CLAIMS B	(French)	EPBBF1	658
SPEC B	(English)	EPBBF1	2978
Total word count - document A			0
Total word count - document B			5744
Total word count - documents A + B			5744

...ABSTRACT kind which produces a wavelength multiplexed optical output signal comprises a broadband optical source, and a tunable filter in the form of a Fabry-Perot **interferometer** connected to receive a **broadband optical** signal from the source. The interferometer is repeatedly swept through its pass band by a control signal of triangular or sawtooth waveform, producing a swept...

...SPECIFICATION drawbacks of the prior optical transducer and its detector system.

According to the present invention, there is provided an optical transducer system comprising a broadband **optical** signal source, an **optical transducer arranged** to receive an **optical** input signal from the **source and** to produce therefrom a wavelength multiplexed digital optical output signal representative of a parameter being monitored by the transducer, and detector means coupled to receive...

...optical output signal from the transducer, characterised in that said input signal is a swept wavelength signal derived from the source by means of an **interferometer** coupled to receive a **broadband optical** signal from the source and means for varying the wavelength of the optical signal transmitted by the interferometer so as to produce said swept wavelength...

...threshold level with which the output signal from the transducer is compared, whereby to compensate automatically for any wavelength drift in the source and any **changes** in the overall transmission characteristics **in the interferometer** .

The **interferometer** is preferably a Fabry-**Perot interferometer** , and the **broadband** source preferably comprises at least two light emitting diodes with different by partially overlapping output spectra.

Furthermore, there is preferably provided control means for maintaining the amplitude of the optical signal transmitted by the interferometer substantially constant, which control means preferably comprises a photo-**sensitive** detector coupled **to** receive the **optical** signal transmitted by the interferometer, a differential amplifier coupled to receive the output of the photo-sensitive detector and a reference level so as to...

...CLAIMS B1

1. An **optical** transducer system comprising a **broadband** **optical** signal source, an **interferometer** coupled to receive a **broadband** **optical** signal from the source, means for varying the wavelength of the optical signal transmitted by the interferometer, an optical transducer coupled to receive the varying...

...source comprises at least two light emitting diodes with different but partially overlapping output spectra.

11. A variable wavelength optical source for a wavelength multiplexed **optical** transducer, the source comprising a **broadband** **optical** source, an **interferometer** coupled to receive a **broadband** **optical** signal from the source, and means for varying the wavelength of the optical signal transmitted by the interferometer so as to produce a swept wavelength...

2/3,K/3 (Item 3 from file: 348)

00262882

Improvements in or relating to lasers.

Laser.

Lasers.

PATENT ASSIGNEE:

Commission of the European Communities, (918830), Bat J Monnet Plateau du Kirchberg, L-2920 Luxembourg, (LU), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

INVENTOR:

Van Dijk, Johannes Wilhelmus, 36 River View Avenue, North Ferriby North Humberside, HU14 3DT, (GB)

LEGAL REPRESENTATIVE:

Oulton, Richard John (34563), R.J. OULTON & CO. 22 Whitefriargate, Hull North Humberside HU1 2EX, (GB)

PATENT (CC, No, Kind, Date): EP 288602 A2 881102 (Basic)
EP 288602 A3 890927

APPLICATION (CC, No, Date): EP 87116618 871110;

PRIORITY (CC, No, Date): GB 8626751 861110

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: H01S-003/105; H01S-003/097; H01S-003/03; H01S-003/086;

ABSTRACT WORD COUNT: 31

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	445
SPEC A	(English)	EPABF1	12507
Total word count - document A			12952
Total word count - document B			0
Total word count - documents A + B			12952

...SPECIFICATION reflectivity advantages of a MGC will be formulated followed first by consideration of its mode selective effects in the TMC arrangement.

The MGC is an **optical** **interferometer** with a **broadband** reflector and a rotatable grating, which is mounted at the blazed angle, reflecting the 1st order of the grating parallel to the incident beam. Analysis...

2/3,K/4 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00731016 **Image available**
X-RAY INTERFEROMETER
INTERFEROMETRE A RAYONS X
Patent Applicant/Assignee:
FOCUSED X-RAYS LLC, 4323 North 30th Street, Boulder, CO 80301, US, US (Residence), US (Nationality)
Inventor(s):
CASH Webster C Jr, 4323 North 30th Street, Boulder, CO 80301, US
Legal Representative:
CARSON W Scott, Dorr, Carson, Sloan & Birney, P.C., 3010 E. 6th Avenue, Denver, CO 80206, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200044003 A2 20000727 (WO 0044003)
Application: WO 2000US2064 20000126 (PCT/WO US0002064)
Priority Application: US 99117302 19990126
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 6618

Fulltext Availability:
Detailed Description

Detailed Description
... the effects of diffraction limit resolution. One way to achieve higher resolution is to exploit an approach that is widely used in the radio and **optical** spectral regions - **interferometry** . We show that a **broadband** x-ray **interferometry** is possible using current technology, and we have established the viability of this approach using laboratory measurements of a prototype interferometer.

For astronomers, interferometry has...

2/3,K/5 (Item 2 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00636540 **Image available**
INTERFEROMETRIC SENSING APPARATUS
APPAREIL DE DETECTION INTERFEROMETRIQUE
Patent Applicant/Assignee:
GEOSENSOR CORPORATION, GEOSENSOR CORPORATION , Suite 210, 10500 Westoffice, Houston, TX 77042-5326 , US
Inventor(s):
KLUTH Erhard Lothar Edgar, KLUTH, Erhard, Lothar, Edgar , The Town Mill, Alresford, Hampshire S024 9DD , GB
VARNHAM Malcolm Paul, VARNHAM, Malcolm, Paul , 76 Grange Road, Alresford, Hampshire SO24 9HF , GB
BULL Philip, BULL, Philip , 14746 Bramblewood, Houston, TX 77079 , US
LUSCOMBE John, LUSCOMBE, John , 2922 Williams Grant, Sugar Land, TX 77479 , US
Patent and Priority Information (Country, Number, Date):
Patent: WO 9919693 A1 19990422
Application: WO 98GB3036 19981009 (PCT/WO GB9803036)

Priority Application: GB 9721473 19971009
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Filing Language: English
Fulltext Word Count: 4899

Fulltext Availability:
Detailed Description
Claims

English Abstract

An **interferometric** sensor includes a **broadband optical** source, a depolarizer for depolarizing **optical** radiation emitted by the **broadband optical** source, a matched **interferometer** , a sensing interferometer, and a detector. The matched interferometer contains a phase modulator. The sensor is configured so that the optical path length difference in...

Detailed Description

... non-limiting embodiment of the present invention, there is provided apparatus for interferometric sensing, which apparatus comprises a broadband optical source, a depolarizer for depolarizing **optical** radiation emitted by the **broadband optical** source, a matched **interferometer** , a sensing interferometer, and a detector, the matched interferometer being such that it contains a phase modulator and the apparatus being SUBSTITUTE SHEET (RULE 26) such that the optical path length difference in the sensing interferometer is approximately equal to the optical path length difference in the matched **interferometer** .

The **broadband optical** source may be a light emitting diode, or a superflu ores cent fiber source, or a super-luminescent diode.

The depolarizer may be a Lyott...described solely by way of example and with reference to the accompanying drawings in which:

4:1
BRIEF DESCRIPTION OF THE DRAWINGS
Figure 1 shows **interferometric** sensing apparatus including a **broadband optical** source and a depolarizer; Figure 2 shows interferometric sensing apparatus containing an optical fiber sensing interferometer; Figure 3 show an optical fiber sensing interferometer; C... interferometric sensing apparatus being used in a seismic streamer.

DETAU-ED DESCRIPTION OF PREFERRED EMBODIMENTS
With reference to Figure 1, there is provided apparatus for **interferometric** sensing comprising a **broadband optical** source 1, a depolarizer 2 for depolarizing **optical** radiation emitted by the **broadband optical** source 1, a matched **interferometer** 3 containing a phase modulator 4, a sensing interferometer 5, and detector 6. The apparatus is such that the optical path length difference in the...are the same, while the wavelength of a Bragg grating in one interferometer is different than the wavelength of a Bragg grating in any other **interferometer** . The unique **broadband optical** radiation for each optical fiber sensing interferometers 81, 82, and 83 is derived from the broadband sources 84, 85, and 86, whose output radiation is...

Claim

CLAIMS Apparatus for **interferometric** sensing comprising a. a **broadband optical** source; b. a detector; and C. an optical path between the source and the detector, the optical path including:

i. a depolarizer in the path for depolarizing **optical** radiation emitted

by the **broadband optical** source, a matched **interferometer** in the path to receive optical radiation from the source, and a sensing interferometer to receive optical radiation from the matched interferometer, the matched interferometer...

2/3,K/6 (Item 3 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00531956 **Image available**
METHOD AND APPARATUS FOR PERFORMING OPTICAL MEASUREMENTS USING A FIBER OPTIC IMAGING GUIDEWIRE, CATHETER OR ENDOSCOPE
PROCEDE ET APPAREIL PERMETTANT D'EFFECTUER DES MESURES OPTIQUES A L'AIDE D'UN ENDOSCOPE, UN CATHETER OU UN FIL DE GUIDAGE D'IMAGERIE A FIBRE OPTIQUE
Patent Applicant/Assignee:
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Inventor(s):
TEARNEY Guillermo
BOPPART Stephen A
BOUMA Brett E
BREZINSKI Mark
SWANSON Eric A
Fujimoto James G
Patent and Priority Information (Country, Number, Date):
Patent: WO 9732182 A1 19970904
Application: WO 97US3033 19970227 (PCT/WO US9703033)
Priority Application: US 96607787 19960227
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO SE SG SI SK TJ TM TR TT UA UG UZ VN YU GH KE LS MW SD SZ UG AM AZ BY KG RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 12774

Fulltext Availability:
Detailed Description

Detailed Description
... measures the optical properties of a structure interferometrically using a short coherence length or frequency tunable light source.

In one embodiment the system includes an **interferometer** which includes a **broadband optical** radiation source; an optical radiation detector; a reference optical reflector; a first optical path leading to the reference optical reflector; and a second optical path...forming part of the imaging system includes a polarization diversity receiver, or alternatively a polarization analyzer. In still another embodiment the source consists of a **broad band optical** source, an **interferometric** detector using an optical spectrum analyzer wherein the Fourier transform of the spectrum is used to derive the reflectance profile of the sample.

It should...

2/3,K/7 (Item 4 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00233254
OPTICAL WAVELENGTH MONITOR
MONITEUR OPTIQUE DE LONGUEURS D'ONDE
Patent Applicant/Assignee:
ALLIED CORPORATION

Inventor(s):
SCHUMA Richard Francis
Patent and Priority Information (Country, Number, Date):
Patent: WO 8802474 A1 19880407
Application: WO 87US1614 19870709 (PCT/WO US8701614)
Priority Application: US 86911562 19860925
Designated States: AT BE CH DE FR GB IT JP LU NL SE
Publication Language: English
Fulltext Word Count: 5395

Fulltext Availability:
Claims

Claim
only by the appending CLAIMS
CLAIMS 1. Fiber **optic** gyroscope **interferometer** including a **broadband** light source, a fiber optic coil, means to detect a Sagnac. phase shift as a result of light passing through the fiber optic coil and...by the International Bureau on 05 February 1988 (05.02.88); original claims 1-10 replaced by amended claims 1-10 (5 pages)] 1. Fiber **optic** gyroscope **interferometer** including a **broadband** light source, a fiber optic coil, me ans to detect a Sagnac phase shift as a result of light passing through the fiber optic coil...
?

16/9/1 (Item 1 from file: 349)

00233254

OPTICAL WAVELENGTH MONITOR
MONITEUR OPTIQUE DE LONGUEURS D'ONDE

Patent Applicant/Assignee:
ALLIED CORPORATION
Inventor(s):
SCHUMA Richard Francis

Patent and Priority Information (Country, Number, Date):
Patent: WO 8802474 A1 19880407
Application: WO 87US1614 19870709 (PCT/WO US8701614)
Priority Application: US 86911562 19860925
Designated States: AT BE CH DE FR GB IT JP LU NL SE
Main International Patent Class: G01C-019/64;
Publication Language: English
Fulltext Word Count: 5395

English Abstract
A wavelength monitor (25) uses a diffraction grating (35) and a beam splitter (31). Light from a superluminescent diode (SLD) is supplied to the beam splitter (31) and is projected onto the grating (35). The grating is formed by holographically projecting a diffraction pattern onto a polished surface which is then photoetched, thereby creating a blazed diffraction grating corresponding to the projected pattern. The etched grating is used as a master, wherein the etched grating is coated with reflective material. The reflective material is then transferred to a prepared substrate that has an ultra-low thermal expansion coefficient to form a low cost replica diffraction grating. The grating (35) formed in this manner becomes a very stable and efficient dispersive element that forms a spectrum of the SLD output that is free of ghost images and accurately reproduces the spectral distribution. A pair of optical sensors (41, 42) detect an imbalance in reflected light, providing an indication of wavelength deviation.

ANIEWED CLAMS

[received by the International Bureau on 05 February 1988 (05.02.88); original claims 1-10 replaced by amended claims 1-10 (5 pages)] 1. Fiber **optic** gyroscope **interferometer** including a **broadband** light source, a fiber optic coil, me ans to detect a Sagnac phase shift as a result of light passing through the fiber optic coil and a wavelength monitor to provide a wavelength deviation signal for controlling the light source, characterized by:
(a) a blazed reflective diffraction grating; (b) means to transmit light from the fiber optic coil to the blazed reflective diffraction grating, said means including **light collimating** means capable of protecting the light onto a significant surface area of the blazed refraction grating; (c) a beam splitter receiving said light reflected from the refraction grating; (d) the light supplied to a wavelength monitor being transmitted through the **beam** splitter to the **collimating** means; (e) the **light** reflected into the beam splitter being transmitted through the means to collimating means in a manner which focuses the reflected light into the beam splitter; (f) optical sensor means to detect an unbalanced state of the light entering the beam spliter; and (g) the light reflected from the blazed diffraction grating being retroflected through the means to **collimate** back to the **beam** splitter so that the optical sensor means detects an off-axis condition of the reflected light.

2. Fiber optic gyroscope as described in claim 1, further characterized by:

the light reflected into the beam splitter being transmitted through the means to collimate in a manner which focuses the reflected light into the beam splitter.
3. Fiber optic gyroscope as described in claim 2 further characterized by:

the light supplied to the wavelength monitor being transmitted through the **beam** splitter to the **collimating** means; and the **light** reflected from the blazed diffraction grating being retroreflected through the means to **collimate** back to the **beam** splitter so that the optical sensor means detects an off-axis condition of the reflected light.

4. Fiber optic gyroscope as described in claim 1 or 3, further characterized by:

the means to collimate being a collimating lens.

5. Fiber optic gyroscope as described in claim 1 or 3, further characterized by:

(a) the diffraction grating and the beam splitter each having means for mounting; (b) a base upon which the diffraction grating and the beam splitter are mounted; (c) the base and each means for mounting having mating surfaces, wherein the base and each means for mounting are mated; and (d) the mating surfaces being polished sufficiently for each of said means for mounting adhering to the base by Van der Walls forces to secure each means for mounting to the base.

6. Fiber optic gyroscope as described in claim 1, further characterized-by:

means to effect a control signal in response to the detection of an unbalanced state of light entering the beam splitter, wherein the control signal is used to control the light wavelength of the Coherent light source.

7. Fiber optic gyroscope as described in claim 1 or 6, further characterized by:

the light source being a superluminescent diode.

8. Fiber optic gyroscope as described in claim 1, further characterized by the blazed diffraction grating being formed by:

(a) preparing a surface of a master grating; (b) applying a photoresist material to the surface; (c) holographically generating a pattern corresponding to a grating pattern to be etched into the master surface7 (d) projecting the holographically generated pattern onto photoresist so as to expose the photoresist; (e) etching the master surface in order to contour the surface in accordance with the diffraction pattern as represented by the exposed photoresist; (f) removing any remaining photoresist from the master surface7 (g) depositing a parting material on the master surface; (h) coating of the master surface with a reflective material, the reflective material being coated over the parting material; (i) preparing a surface of a new thermally stable substrate so as to permit the reflective material to be bonded to the new substrate; (j) bringing the surface of the new substrate into contact with the coated surface of the master; and (k) separating the surfaces in a manner which resu lts in the reflective coating materia 1 remaining bonded to the new substrate and becoming separated from the master.

9. Interferometer including a coherent light source generating coherent light, a wavelength monitor, and means to conduct the coherent light to the wavelength monitor, characterized by the wavelength monitor including:

(a) a blazed reflective diffraction grating formed by preparing a master surface having a blazed diffraction grating pattern thereon, depositing of a parting material on the master, coating of the master with a reflective material, the reflective material being coated over the parting material, preparing a surface of a new substrate so as to permit the reflective material to be bonded to the new substrate, bringing the surface of the new substrate into contact with the coated surface of the master, and separating the surfaces in a manner which results in the reflective coating material remaining bonded to the new substrate and becoming separated from the master; (b) means to transmit light to the blazed reflective diffraction grating, said means including **light collimating** means capable of protecting the light onto a significant surface area of the blazed refraction grating; (c) a beam splitter receiving said light reflected from the refraction grating; (d) the light supplied to a wavelength monitor being transmitted through the **beam** splitter to the **collimating** means; (e) the **light** reflected into the beam splitter being transmitted through the means to collimating means in a manner which focuses the reflected light into the beam splitter; (f) optical sensor means to detect an unbalanced state of the light entering the beam spliter; and (g) the light reflected from the blazed diffraction grating being retroflected through the means to **collimate** back to the **beam** splitter so that the optical sensor means detects an off-axis condition of the reflected light.

10. Interferometer as described in claim 9, further characterized by: (a) the diffraction grating and the beam splitter each having means for mounting; (b) a base upon which the diffraction grating and the beam splittel are mounted; C& the base and each means for mounting having mating surfaces, wherein the base and each means for mounting are mated; and (d) the mating surfaces being polished sufficiently for each of said means for mounting adhering to the base by Van der tolls forces to secure each means for mounting to the base.

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20/TI/1 (Item 1 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Total internal reflection holographic recording and imaging apparatus and a method of forming a hologram and reconstructing an image therefrom
Vorrichtung zur Aufnahme und Erzeugung von Hologrammen durch innere Totalreflektion und Verfahren zur Erzeugung eines Hologramms und zur Rekonstruktion einer Abbildung davon
Dispositif d'enregistrement et d'imagerie holographique a reflexion interne totale et procede de fabrication d' un hologramme et de reconstruction d' une image de cet hologramme

20/TI/2 (Item 2 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical method and apparatus for detecting defects
Optisches Verfahren und Vorrichtung zum Erkennen von Fehlstellen
Procede et dispositif optiques de detection de defauts

20/TI/3 (Item 3 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Method of and apparatus for inspecting honeycomb-shaped object having plural through holes
Verfahren und Vorrichtung zum Prufen wabenformiger Objekte mit mehreren Durchgangslochern
Methode et dispositif d'inspection d'objets en forme de nid d'abeilles avec une pluralite de trous traversants

20/TI/4 (Item 4 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Step stare scanning apparatus and method
Abtastung Apparat und Verfahren mit einem Sprung der optischen Weglenge
Appareil de balayage et methode avec un saut du pas optique

20/TI/5 (Item 5 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Scanning confocal microscope providing a continuous display
Konfokales Rastermikroskop mit kontinuierlicher Anzeige
Microscope confocal a balayage fournissant un affichage continu

20/TI/6 (Item 6 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Storage phosphor size compensation system
Grossenkompensierung-system fur ein Speicherleuchschirm
Systeme de compensation de cote avec un ecran d'enregistrement luminescent

20/TI/7 (Item 7 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Scanning confocal microscope
Konfokales Rastermikroskop
Microscope confocal a balayage

20/TI/8 (Item 8 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

An optical pattern recognition system and driving method of ferroelectric liquid crystal spatial light modulator
Optisches Mustererkennungssystem und Ansteuerverfahren fur raumlichen Lichtmodulator mit ferroelektrischen, flussigen Kristallen
Systeme de reconnaissance de forme optique et procede de commande de modulateur spatial de lumiere a cristaux liquides ferroelectriques

20/TI/9 (Item 9 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical scanning apparatus
Optisches Abtastgerat
Appareil de balayage optique

20/TI/10 (Item 10 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical scanning apparatus
Optisches Abtastgerat
Appareil de balayage optique

20/TI/11 (Item 11 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical scanning apparatus
Optisches Abtastgerat
Explorateur optique

20/TI/12 (Item 12 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Hand-held bar code reader.
Handfuhrbarer Strichcodeleser.
Lecteur de code-barre portatif.

20/TI/13 (Item 13 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Bar code scanning system.
Strichkode-Abtastsystem.
Systeme balayeur de code a barres.

20/TI/14 (Item 14 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Apparatus and method for testing circular cylindrical or conical surfaces.
Vorrichtung und Verfahren zur Prufung von kreisformigen zylindrischen oder kegelformigen Oberflachen.
Dispositif et methode pour tester des surfaces circulaires cylindriques ou coniques.

20/TI/15 (Item 15 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Method for forming a fine pattern by using a patterned resist layer.
Methode zur Herstellung von Feinstrukturen durch Verwendung einer strukturierten Photolackschicht.
Methode pour l'obtention de textures tres fines en utilisant une couche texturee resistante.

20/TI/16 (Item 16 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Wavelength scanning interferometry and interferometer employing laser diode.
Interferometrie mit veranderlicher Wellenlange und Interferometer mit Laserdiode.
Interferometrie avec une longueur d'ondes variable et interferometre avec diode a laser.

20/TI/17 (Item 17 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Compact laser scanning system.
Kompaktes Laserabtastgerat.
Systeme de balayage a laser compact.

20/TI/18 (Item 18 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Light-beam scanning apparatus.
Lichtbundel-Abtastapparat.
Appareil de balayage a faisceau lumineux.

20/TI/19 (Item 1 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

AN APPARATUS AND METHOD FOR THE RAPID SPECTRAL RESOLUTION OF CONFOCAL IMAGES
APPAREIL ET PROCEDE DE RESOLUTION SPECTRALE RAPIDE D'IMAGES CONFOCALES

20/TI/20 (Item 2 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

AUTOMATICALLY-ACTIVATED HAND-SUPPORTABLE LASER SCANNING BAR CODE SYMBOL READING SYSTEM HAVING DATA-TRANSMISSION ACTIVATION SWITCH
SYSTEME DE LECTURE DES SYMBOLES D'UN CODE A BARRES A BALAYAGE LASER, POUVANT ETRE PRIS A LA MAIN, ET ACTIVE AUTOMATIQUEMENT, POURVU D'UN COMMUTATEUR D'ACTIVATION DE TRANSMISSION DE DONNEES

20/TI/21 (Item 3 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

SCANNER SYSTEM
SYSTEME DE BALAYAGE

20/TI/22 (Item 4 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

OPTICAL SCANNER SYSTEM
SYSTEME DE BALAYAGE OPTIQUE

20/TI/23 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

APPARATUS FOR IMAGING BLOOD FLOW IN THE MICROCIRCULATION
APPAREIL DE VISUALISATION DU FLUX SANGUIN DANS LA MICROCIRCULATION

20/TI/24 (Item 6 from file: 349)

PROJECTION DISPLAY WITH GRADATION LEVELS OBTAINED BY MODULATION OF BEAMLETS
AFFICHAGE PAR PROJECTION AVEC OBTENTION DE NIVEAUX DE GRADATION PAR MODULATION DE PETITS FAISCEAUX

20/TI/25 (Item 7 from file: 349)

FRINGE PATTERN DISCRIMINATOR FOR INTERFEROMETER USING DIFFRACTION GRATINGS
DISCRIMINATEUR DE DIAGRAMMES DE FRANGES POUR INTERFEROMETRE UTILISANT DES RESEAUX DE DIFFRACTION

20/TI/26 (Item 8 from file: 349)

FAST PATTERN RECOGNIZER
SYSTEME DE RECONNAISSANCE RAPIDE DE MOTIFS

20/TI/27 (Item 9 from file: 349)

SCANNING APPARATUS FOR HALFTONE IMAGE SCREEN WRITING
APPAREIL DE BALAYAGE POUR REPRODUCTION D'IMAGES EN DEMI TEINTES

20/TI/28 (Item 10 from file: 349)

HOLOGRAPHIC SCANNING SYSTEM
SYSTEME D'EXPLORATION HOLOGRAPHIQUE

20/TI/29 (Item 11 from file: 349)

SCANNING BEAM OPTICAL POSITION DETERMINING APPARATUS AND METHOD
PROCEDE ET APPAREIL POUR DETERMINER LA POSITION OPTIQUE D'UN FAISCEAU ANALYSEUR
?

20/5/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00517974
An optical pattern recognition system and driving method of ferroelectric liquid crystal spatial light modulator
Optisches Mustererkennungssystem und Ansteuerverfahren fur raumlichen Lichtmodulator mit ferroelektrischen, flussigen Kristallen
Systeme de reconnaissance de forme optique et procede de commande de modulateur spatial de lumiere a cristaux liquides ferroelectriques
PATENT ASSIGNEE:
SEIKO INSTRUMENTS INC., (839490), 31-1, Kameido 6-chome Koto-ku, Tokyo 136, (JP), (Proprietor designated states: all)
SUMITOMO CEMENT CO. LTD., (382910), 1, Kanda Mitoshiro-cho, Chiyoda-ku Tokyo 101-8677, (JP), (Proprietor designated states: all)
INVENTOR:
Iwaki, Tadao, c/o Seiko Instruments Inc., 31-1, Kameido 6-chome, Koto-ku, Tokyo, (JP)
Mitsuoka, Yasuyuki, c/o Seiko Instruments Inc., 31-1, Kameido 6-chome, Koto-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:
Fleuchaus, Leo, Dipl.-Ing. et al (3741), Melchiorstrasse 42, 81479 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 510540 A2 921028 (Basic)
EP 510540 A3 940511
EP 510540 B1 990825
APPLICATION (CC, No, Date): EP 92106671 920416;
PRIORITY (CC, No, Date): JP 9192461 910423; JP 91181316 910722
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06K-009/74** ; G02F-001/135
CITED REFERENCES (EP A):
PROC. OF THE SPIE: COMPUTER AND OPTICALLY FORMED HOLOGRAPHICS OPTICS, vol.1211, 15 January 1990, LOS ANGELES, CA pages 273 - 83 S. YAMAMOTO ET AL 'Optical pattern recognition with LAPS-SLM (I) / Light Addressed Photoconductor and Smetic C* Liquid Crystal spatial Light Modulator'
PROC. OF SPIE: ADVANCES IN OPTICAL PROCESSING III, vol.936, 6 April 1988, ORLANDO, FLA pages 48 - 55 G. MODDEL, K. M. JOHNSON ET AL 'Design and performance of high-speed Optically Addressed Spatial Light Modulators'
OPTICS LETTERS, vol.15, no.21, 1 November 1990 pages 1218 - 20 T. IWAKI ET AL 'Optical attern recognition of letters by a joint-transform correlator using a ferroelectric-crystal spatial light modulator'
PROCEEDINGS OF THE SID. VOIR GROUPE G06F3/00, vol.23, no.1, 1982, LOS ANGELES, CA pages 15 - 22 W A CROSSLAND 'A dyed-phase-change liquid crystal display over MOSFET switching array'
SOCIETY FOR INFORMATION DISPLAY SID INT. SYMPOSIUM, vol.XIX, May 1988, ANAHEIM, CA pages 41 - 4, XP000043730 S MATSUMOTO ET AL 'Large area video rate multicolor ferroelectric liquid crystal display';
CITED REFERENCES (EP B):
PROC. OF THE SPIE: COMPUTER AND OPTICALLY FORMED HOLOGRAPHICS OPTICS, vol.1211, 15 January 1990, LOS ANGELES, CA pages 273 - 83 S. YAMAMOTO ET AL 'Optical pattern recognition with LAPS-SLM (I) / Light Addressed Photoconductor and Smetic C* Liquid Crystal spatial Light Modulator'
PROC. OF SPIE: ADVANCES IN OPTICAL PROCESSING III, vol.936, 6 April 1988, ORLANDO, FLA pages 48 - 55 G. MODDEL, K. M. JOHNSON ET AL 'Design and performance of high-speed Optically Addressed Spatial Light Modulators'
OPTICS LETTERS, vol. 15, no. 21, 01 November 1990, pages 1218 - 20 T. IWAKI ET AL 'Optical pattern recognition of letters by a joint-transform correlator using a ferroelectric-crystal spatial light modulator'
PROCEEDINGS OF THE SID. VOIR GROUPE G06F3/00, vol.23, no.1, 1982, LOS ANGELES, CA pages 15 - 22 W A CROSSLAND 'A dyed-phase-change liquid crystal display over MOSFET switching array'
SOCIETY FOR INFORMATION DISPLAY SID INT. SYMPOSIUM, vol.XIX, May 1988, ANAHEIM, CA pages 41 - 4, XP000043730 S MATSUMOTO ET AL 'Large area

video rate multicolor ferroelectric liquid crystal display';

ABSTRACT EP 510540 A2

A method of driving a ferroelectric liquid crystal spatial light modulator at high speed is provided. An optical **pattern recognition** system is also provided which is capable of recognizing or identifying two-dimensional image information in real time by using this method.

The driving method includes a means for driving the optically addressed type ferroelectric liquid crystal spatial light modulator without a light reflection separation layer; a means for modulating the intensities of the writing light and the reading light emitted from a laser diode and from a liquid crystal light shutter which uses a ferroelectric liquid crystal as the light modulating medium; and a means for synchronizing the spatial light modulator driving means with the means for modulating the intensities of the writing and reading light. The driving method is characterized in that it tops emitting the reading light while the write voltage is applied to the spatial light modulator. The optical **pattern recognition** system is a joint transform light correlator which performs the following operations: simultaneously Fourier-transforming by using coherent light at least one reference image including specified marks and at least one input image to be entered; displaying the Fourier-transformed image on the optically addressed type spatial light modulator; and Fourier-transforming the displayed Fourier-transformed image again to produce correlation peaks that correspond to the two-dimensional correlation coefficients between the reference image and the input image. The means for generating the coherent light is the laser diode, and the means for performing the Fourier transform two times is one and the same Fourier transform lens. (see image in original document)

ABSTRACT WORD COUNT: 264

NOTE:

Figure number on first page: 2

LEGAL STATUS (Type, Pub Date, Kind, Text):

Oppn None:	000809	B1	No opposition filed: 20000526
Application:	921028	A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	940511	A3	Separate publication of the European or International search report
Examination:	940831	A2	Date of filing of request for examination: 940704
Examination:	960911	A2	Date of despatch of first examination report: 960726
Change:	990825	A2	Title of invention (German) changed: 19990703
Change:	990825	A2	Title of invention (French) changed: 19990703
Grant:	990825	B1	Granted patent

LANGUAGE (Publication,Procedural,Application): English; English; English

20/3,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00517974
An optical pattern recognition system and driving method of ferroelectric liquid crystal spatial light modulator
Optisches Mustererkennungssystem und Ansteuerverfahren fur raumlichen Lichtmodulator mit ferroelektrischen, flussigen Kristallen
Systeme de reconnaissance de forme optique et procede de commande de modulateur spatial de lumiere a cristaux liquides ferroelectriques
PATENT ASSIGNEE:
SEIKO INSTRUMENTS INC., (839490), 31-1, Kameido 6-chome Koto-ku, Tokyo 136, (JP), (Proprietor designated states: all)
SUMITOMO CEMENT CO. LTD., (382910), 1, Kanda Mitoshiro-cho, Chiyoda-ku Tokyo 101-8677, (JP), (Proprietor designated states: all)
INVENTOR:
Iwaki, Tadao, c/o Seiko Instruments Inc., 31-1, Kameido 6-chome, Koto-ku, Tokyo, (JP)
Mitsuoka, Yasuyuki, c/o Seiko Instruments Inc., 31-1, Kameido 6-chome, Koto-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:
Fleuchaus, Leo, Dipl.-Ing. et al (3741), Melchiorstrasse 42, 81479 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 510540 A2 921028 (Basic)
EP 510540 A3 940511
EP 510540 B1 990825
APPLICATION (CC, No, Date): EP 92106671 920416;
PRIORITY (CC, No, Date): JP 9192461 910423; JP 91181316 910722
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06K-009/74** ; G02F-001/135
ABSTRACT WORD COUNT: 264
NOTE:
Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9934	852
CLAIMS B	(German)	9934	737
CLAIMS B	(French)	9934	973
SPEC B	(English)	9934	15375
Total word count - document A			0
Total word count - document B			17937
Total word count - documents A + B			17937

An optical pattern recognition system and driving method of ferroelectric liquid crystal spatial light modulator
INTERNATIONAL PATENT CLASS: **G06K-009/74** ...

...ABSTRACT A2
A method of driving a ferroelectric liquid crystal spatial light modulator at high speed is provided. An optical **pattern recognition** system is also provided which is capable of recognizing or identifying two-dimensional image information in real time by using this method. The driving method...

...driving method is characterized in that it tops emitting the reading light while the write voltage is applied to the spatial light modulator. The optical **pattern recognition** system is a joint transform light correlator which performs the following operations: simultaneously Fourier-transforming by using coherent light at least one reference image including...

...SPECIFICATION 101 is a laser diode (LD) for writing, 102 a first collimator lens, 103 a first beam forming prism, 104 an electrically addressed type spatial **light modulator** , 105 a polarized **light beam**

splitter , 106 a Fourier transform lens, 107 an FLC-OASLM, 108 a laser diode (LD) for reading, 109 a second collimator lens, 110 a second beam ...

...marks and at least one input image to be entered, both images being displayed on the image display means, includes the writing LD 101, first **collimator** lens 102, first **beam** forming prism 103, electrically addressed type spatial **light modulator** 104, polarized **light beam splitter** 105, image input terminal 115, drive control circuit 112 and power supply 113. A means for optically Fourier-transforming the coherent image and producing a...

...means for converting the joint Fourier-transformed image into an intensity distribution image and displaying the intensity distribution image on the optically addressed type spatial **light modulator** includes an FLC-OASLM 107, drive control circuit 112, and power supply 113. A means for reading the intensity distribution image displayed on the optically addressed type spatial **light modulator** by using the coherent **light** includes a laser diode for reading 108, second **collimator** lens 109, second **beam** forming prism 110, drive control circuit 112 and power supply 113. A means for Fourier-transforming the intensity distribution image read out into a two-dimensional correlation image distribution of the reference image and the input image includes a Fourier transform lens 106 and a **polarized light beam splitter** 105. A **light** -electricity conversion element for detecting the intensity of correlation peaks that correspond to the correlation coefficients between the reference image and the input image contained...the invention will be explained. Figure 16 shows the configuration of the embodiment which uses an FLC-OASLM rather than the electrically addressed type spatial **light modulator** as the image information input means. Designated 117 is a second FLC-OASLM, 118 a focusing lens, 119 an object to be input, and 120...

...specified marks and at least one input image to beentered, both images being displayed on the image display means, includes the writing LD 101, first **collimator** lens 102, first **beam** forming prism 103, second FLC-OASLM 117, **polarized light beam splitter** 105, drive control circuit 112 and power supply 113. A means for optically Fourier-transforming the coherent image and producing a joint Fourier-transformed image...

...means for converting the joint Fourier-transformed image into an intensity distribution image and displaying the intensity distribution image on the optically addressed type spatial **light modulator** includes an FLC-OASLM 107, drive control circuit 112, and power supply 113. A means for reading the intensity distribution image displayed on the optically addressed type spatial **light modulator** by using the coherent **light** includes a laser diode for reading 108, second **collimator** lens 109, second **beam** forming prism 110, drive control circuit 112 and power supply 113. A means for Fourier-transforming the intensity distribution image read out into a two...

CLAIMS 1. Optical **pattern recognition** system which automatically recognizes or measures a specified pattern from two-dimensional images comprising
an image display means (104), (117) for displaying at least one...

...the reference image and the input image; and
that said second laser source has an oscillation wavelength which is longer than 660 nm.

2. Optical **pattern recognition** system as claimed in claim 1, wherein the optically addressed type spatial light modulator (107) uses a hydrogenated amorphous silicon as the photoconductive layer.

3. Optical **pattern recognition** system as claimed in claim 1 and 2, wherein the image display means (104), (117) is an optically addressed type ferroelectric liquid crystal spatial light modulator having a light reflection layer.

4. Optical **pattern recognition** system as claimed in claim 1 and 2,

20/5/26 (Item 8 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00520643 **Image available**
FAST PATTERN RECOGNIZER
SYSTEME DE RECONNAISSANCE RAPIDE DE MOTIFS
Patent Applicant/Assignee:
FPR CORPORATION
Inventor(s):
CHASE Walter E
Patent and Priority Information (Country, Number, Date):
Patent: WO 9721190 A1 19970612
Application: WO 96US19389 19961205 (PCT/WO US9619389)
Priority Application: US 95567892 19951206
Designated States: AL AM AU BB BG BR BY CA CN CZ EE GE HU IL IS JP KP KR LK LR LT LV MG MK NO NZ PL RO SG SI SK TR TT UA UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM ML MR NE SN TD TG
Main International Patent Class: **G06K-009/52 ;**
International Patent Class: **G06K-009/00 ;**
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 11812

English Abstract
A fast **pattern recognition** system includes a combination of digital and analog processing circuitry which allows the system to achieve super computing processing speeds within an open personal computer architecture. The system receives a bit map which is representative of the unknown pattern, such as a picture of an unknown person. The bit map could have multiple people in it - no other system has "faces in the crowd" ability. The bit map associated with the unknown pattern is then pre-processed and compared against a plurality of known patterns in a database to determine how well the unknown pattern correlates with the known patterns.

22/TI/1 (Item 1 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Methods and apparati for spectral imaging using an interferometer in which a finite number of coherent beams interfere mutually
Verfahren und Vorrichtungen zur spektralen Abbildung mittels eines Interferometers mit gegenseitiger Uberlagerung einer endlichen Zahl von koharenten Strahlen
Methodes et dispositifs d'imagerie spectrale utilisant un interferometre dans lequel un nombre fini de faisceaux coherents interferent mutuellement

22/TI/2 (Item 2 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Integrated optic read/write head for optical data storage incorporating second harmonic generator, electrooptic tracking error actuator, and electro-optic modul
Integrierter Lese-/Schreibkopf zur Speicherung von optischen Daten, versehen mit einem eine zweite Oberwelle erzeugenden Generator, einem elektrooptischen Spurf
Tete d'ecriture/lecture optique integree pour enregistrement de donnees comprenant un generateur de la seconde harmonique, un actuateur electrooptique de suivi

22/TI/3 (Item 3 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Waveguide optical pick-up head using Mach-Zehnder interferometer wavefront sensor apparatus and method.
Wellenleitender optischer Aufnehmer mit einem Mach-Zehnder-Interferometer-Wellenfrontsensor sowie Verfahren.
Tete de lecture optique en forme de guide d'ondes utilisant un interferometre Mach-Zehnder; appareil et methode pour ceci.

22/TI/4 (Item 4 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical waveguide recording medium playing apparatus.
Wiedergabegerat fur optisches Aufzeichnungsmedium mit Wellenleitern.
Appareil de reproduction pour milieu d'enregistrement avec guide d'ondes optique.

22/TI/5 (Item 5 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Optical waveguide recording medium playing apparatus.
Gerat zum Wiedergeben eines Aufzeichnungstragers mit optischem Wellenleiter.
Appareil de reproduction pour milieu d'enregistrement avec guide d'ondes optique.

22/TI/6 (Item 6 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

METHOD AND DEVICE FOR DETERMINING SURFACE PROFILE OF DIFFUSION-REFLECTING OBJECTS
VERFAHREN UND VORRICHTUNG ZUR DETERMINATION DES OBERFLACHENPROFILS VON DIFFUS-REFLEKTIERENDEN OBJEKTEN
PROCEDE ET DISPOSITIF DE DETERMINATION DU PROFIL DE SURFACE D'OBJETS DE DIFFUSION-REFLECTION

22/TI/7 (Item 7 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Method of characterizing bistable semiconductor lasers.
Verfahren zum Charakterisieren von bistabilen Halbleiterlasern.
Methode pour caracteriser des lasers a semi-conducteur bistables.

22/TI/8 (Item 8 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

SELF-OSCILLATING, OPTICAL RESONANT SENSOR.
SELBSTOSZILLIERENDER, OPTISCHER RESONANZ SENSOR.
DETECTEUR RESONNANT OPTIQUE AUTO-OSCILLANT.

22/TI/9 (Item 9 from file: 348)
DIALOG(R)File 348:(c) 2001 European Patent Office. All rts. reserv.

Polarization-insensitive optical switch and multiplexing apparatus.
Von der Polarisation unabhangiger optischer Schalter und Multiplex-Vorrichtung.
Commutateur optique et dispositif de multiplexage independant de la polarisation incidente.

22/TI/10 (Item 1 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

METHOD AND APPARATUS FOR SPECTRAL ANALYSIS OF IMAGES
PROCEDE ET DISPOSITIF D'ANALYSE SPECTRALE D'IMAGES

22/TI/11 (Item 2 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

METHOD AND APPARATUS FOR IMAGING SEMICONDUCTOR DEVICE PROPERTIES
PROCEDE ET APPAREIL D'IMAGERIE DES PROPRIETES D'UN DISPOSITIF A SEMI-CONDUCTEUR

22/TI/12 (Item 3 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

IMAGE SYNTHESIS USING TIME SEQUENTIAL HOLOGRAPHY
SYNTHESE D'IMAGE UTILISANT L'HOLOGRAPHIE A SEQUENCE TEMPORELLE

22/TI/13 (Item 4 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

DISTANCE MEASURING SYSTEM AND METHOD
SYSTEME ET PROCEDE DE MESURE DE DISTANCE

22/TI/14 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2001 WIPO/MicroPat. All rts. reserv.

SELF-OSCILLATING, OPTICAL RESONANT SENSOR
DETECTEUR RESONNANT OPTIQUE AUTO-OSCILLANT
?

22/5/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01089321

Methods and apparati for spectral imaging using an interferometer in which a finite number of coherent beams interfere mutually

Verfahren und Vorrichtungen zur spektralen Abbildung mittels eines Interferometers mit gegenseitiger Uberlagerung einer endlichen Zahl von koharenten Strahlen

Methodes et dispositifs d'imagerie spectrale utilisant un interferometre dans lequel un nombre fini de faisceaux coherents interferent mutuellement

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PATENT (CC, No, Kind, Date): EP 957346 A2 991117 (Basic)
EP 957346 A3 000503
APPLICATION (CC, No, Date): EP 99111904 930722;
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; NL; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 767361 (EP 93203737)
INTERNATIONAL PATENT CLASS: G01J-003/28

ABSTRACT EP 957346 A2

A method and an apparatus for analyzing an optical image of a scene to determine the spectral intensity of each pixel thereof, comprising: collecting and **collimating** incident **light** from the scene; passing the light through an interferometer wherein the **light** is first **split** into a finite plurality of coherent beams which travel along different **optical** paths inside the **interferometer** and then recombine to interfere with each other, the interferometer thereby outputting **modulated light** corresponding to a predetermined set of linear combinations of the spectral intensity of the light emitted from each pixel; focusing the light outputted from the interferometer on a two dimensional detector array; and processing the output of the detector array to determine the spectral intensity of each pixel thereof; the interferometer being of the translating type in which the optical path difference is varied to **modulate** the **light** by translating an element of the interferometer, such that at each instant each detector sees a different point of the scene and its signal is a linear combination of the spectral content of the light coming from each pixel, and that when the scanner completes one interferometer scan, the scene will have been scanned at all relevant linear combinations of the spectral content.

ABSTRACT WORD COUNT: 205
NOTE:
Figure number on first page: 2

LEGAL STATUS (Type, Pub Date, Kind, Text):
Change: 000503 A2 Title of invention (German) changed: 20000314
Application: 991117 A2 Published application without search report
Examination: 000816 A2 Date of request for examination: 20000619
Change: 000503 A2 Title of invention (English) changed: 20000314
Change: 000503 A2 Title of invention (French) changed: 20000314
Search Report: 000503 A3 Separate publication of the search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS A (English) 9946 930

22/5/10 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00598556 **Image available**

METHOD AND APPARATUS FOR SPECTRAL ANALYSIS OF IMAGES
PROCEDE ET DISPOSITIF D'ANALYSE SPECTRALE D'IMAGES

Patent Applicant/Assignee:
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BUCKWALD Robert A, BUCKWALD, Robert, A. , Hadagon 1, 30095 Ramat Yishay , IL

Patent and Priority Information (Country, Number, Date):
Patent: WO 9844314 A1 19981008
Application: WO 98IL159 19980401 (PCT/WO IL9800159)
Priority Application: US 97831380 19970401

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: G01B-009/02;
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 8377

English Abstract
A method and apparatus for analyzing an optical image of a scene to determine the spectral intensity of each pixel thereof, by: collecting (20) incident light from the scene; scanning (22) the incident light; passing the scanned light through an interferometer (24) which outputs modulated light corresponding to a predetermined set of linear combinations of the spectral intensity of the light emitted from each pixel; focusing the light ouputted from the interferometer on a detector array (26); and processing (28) the output of the detector array to determine the spectral intensity of each pixel thereof.

22/3,K/10 (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00598556 **Image available**

METHOD AND APPARATUS FOR SPECTRAL ANALYSIS OF IMAGES
PROCEDE ET DISPOSITIF D'ANALYSE SPECTRALE D'IMAGES

Patent Applicant/Assignee:
APPLIED SPECTRAL IMAGING LTD, APPLIED SPECTRAL IMAGING LTD. , P.O. Box 101, 10551 Migdal Haemek , IL
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BUCKWALD Robert A, BUCKWALD, Robert, A. , Hadagon 1, 30095 Ramat Yishay , IL

Patent and Priority Information (Country, Number, Date):
Patent: WO 9844314 A1 19981008
Application: WO 98IL159 19980401 (PCT/WO IL9800159)
Priority Application: US 97831380 19970401
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Filing Language: English
Fulltext Word Count: 8377

Fulltext Availability:
Detailed Description
Claims

Detailed Description
... spectral intensity of each pixel thereof, comprising: collecting incident light from the scene; scanning the incident light along at least one dimension; passing the scanned **light** through an interferometer which outputs **modulated light** corresponding to a predetermined set of linear combinations of the spectral intensity of the light emitted from ...method comprising the steps of. (a) collecting incident light simultaneously from all points of the two-dimensional scene using collimating optics; (b) passing said incident **collimated light** through an interferometer system having a number of elements, so that said **light** is first **split** into two coherent **beams** which travel along different **optical** paths inside said **interferometer** and then said two coherent beams recombine to interfere with each other to form an exiting light; (c) passing said exiting light through a focusing...

...light through an interferometer system having a number of elements, so that said light is first split into two coherent beams which travel along different **optical** paths inside said **interferometer** and then said two coherent beams recombine to interfere with each other to form an exiting light; (c) passing said exiting light through a focusing...because in this way every detector within the array 36 corresponds to a single optical phase difference through- the etalon 33 of the Fabry Perot **interferometer** 33. The **optical** system 31 can be either refractive or reflective.